

MAY, 1921

THE MINING CONGRESS JOURNAL

VOLUME 7

NUMBER 5



In This Issue:

Mines Furnish Two-thirds of
All Railroad Tonnage

Secretary Fall Analyzes World
Oil Situation

Relief Legislation Promised by
House Mining Committee

Cost of Railroad Fuel

Dr. Bain Named Director of
Bureau of Mines

Repeal of Pittman Act Opposed

Chairman James H. Channon
Optimistic Over Outlook

The Mining World Mirrored
from Washington

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of Pennsylvania
Secretary of Labor

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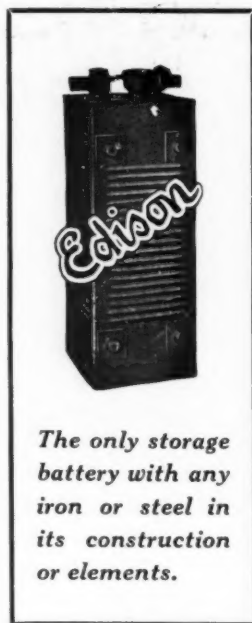
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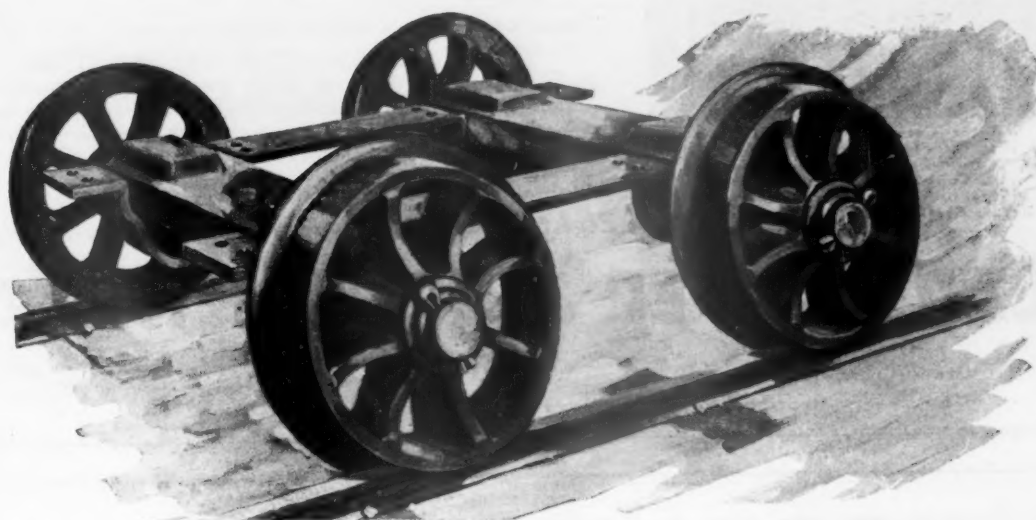
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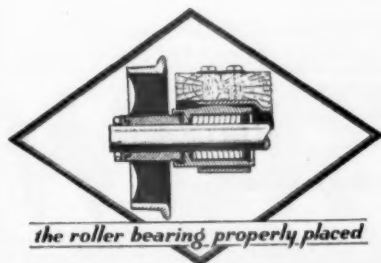


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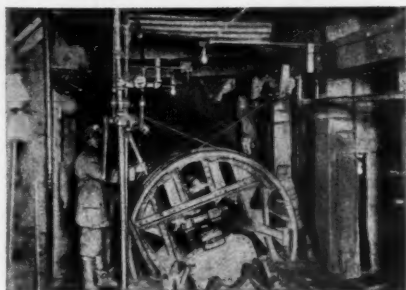
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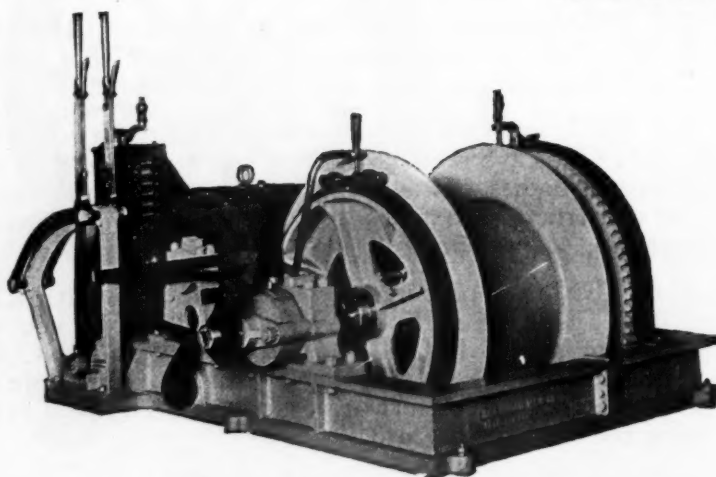
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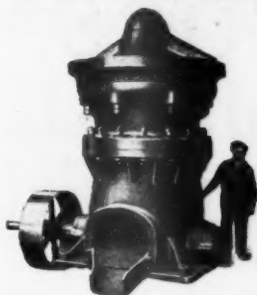
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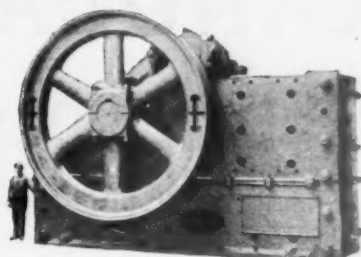
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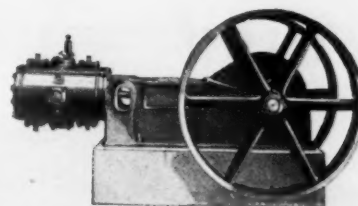
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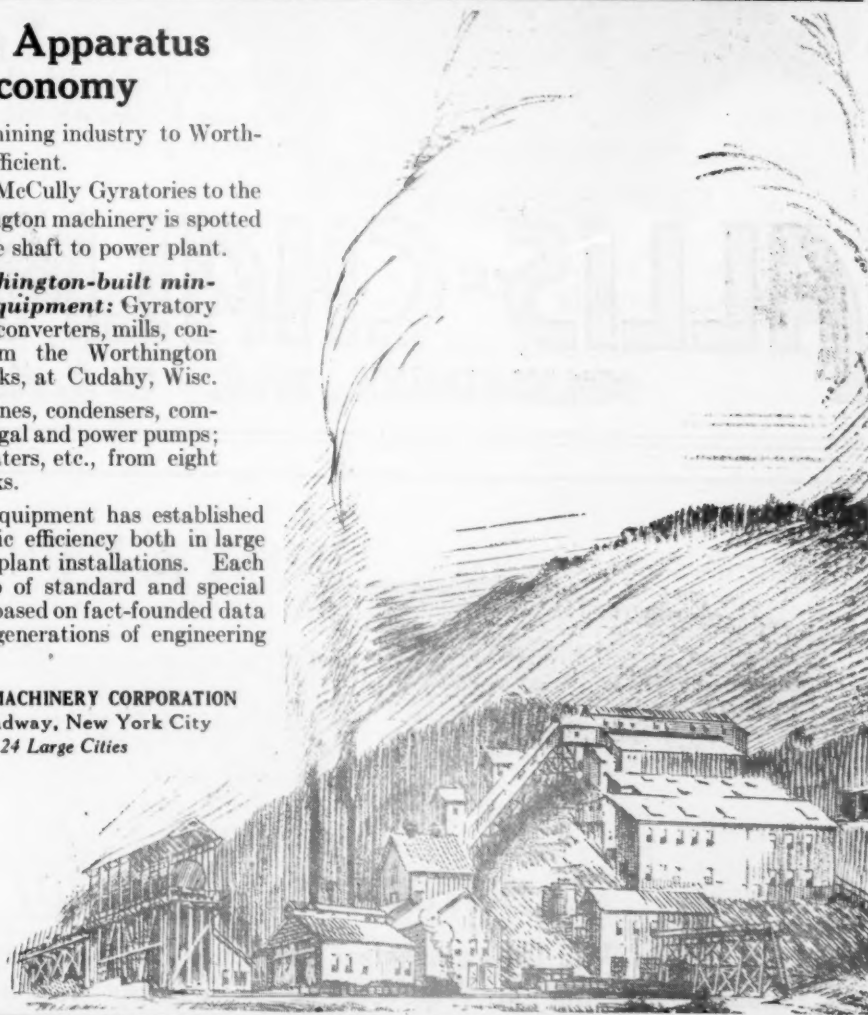
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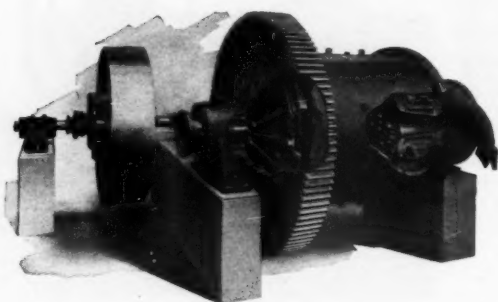
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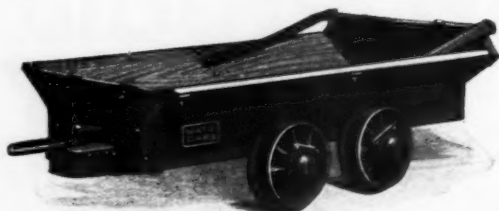
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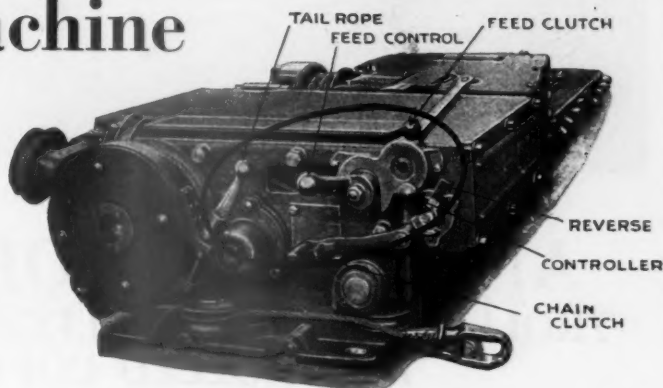
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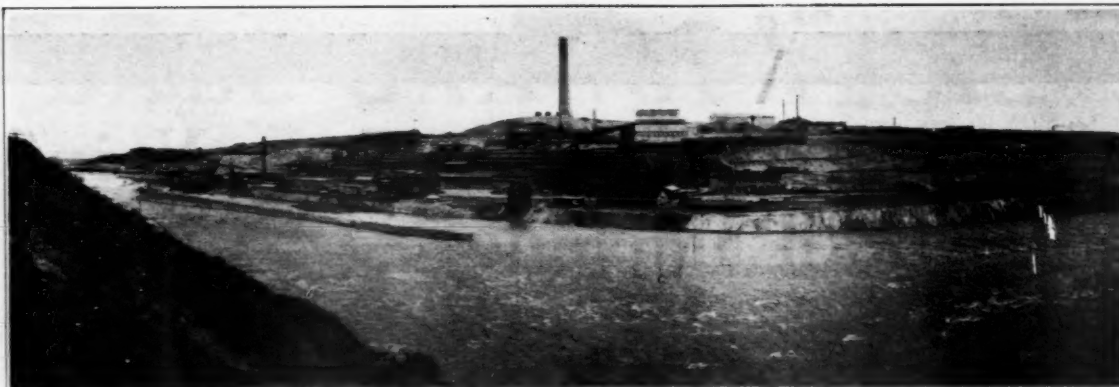
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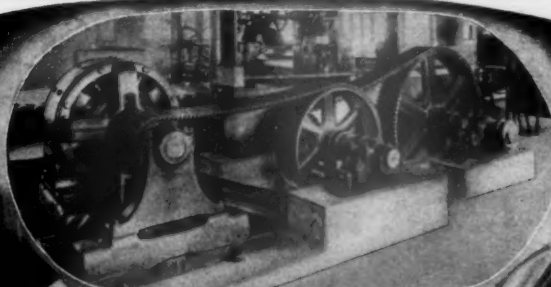
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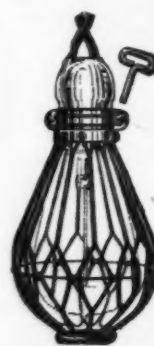
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LOK Steel Lamp Guards
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Important Announcement

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"We have requested the Operating Department to discontinue the manufacture of high-freezing straight dynamite and to make all strengths of Du Pont Straight on the new low-freezing formula. Field tests with this low-freezing straight indicate that it is fully the equal of our high-freezing straight in strength and that it will stand up as well in cold weather as our Du Pont Gelatin, or Red Cross Extra grades. Recent field examination showed that it remained plastic at ten degrees below zero. . . The low-freezing straight will give satisfaction at freezing and lower temperatures. . ."

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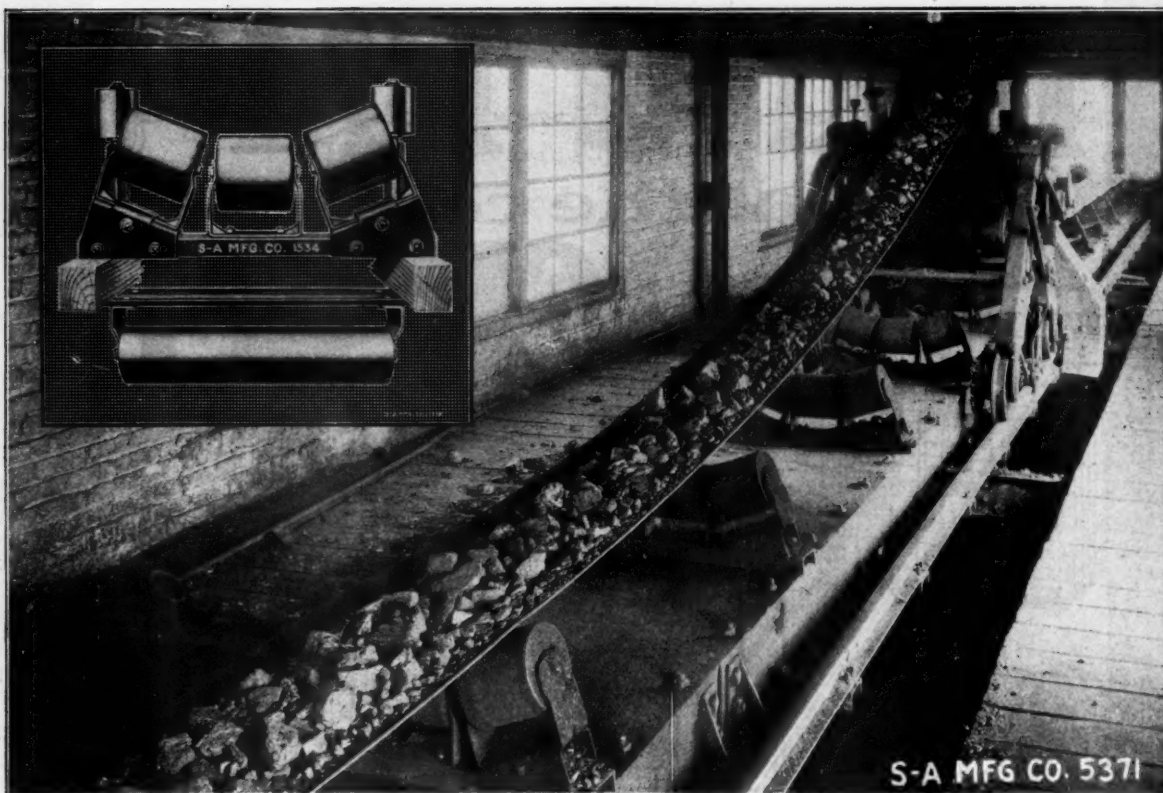
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The MINING CONGRESS JOURNAL

PUBLISHED EACH MONTH BY THE AMERICAN MINING CONGRESS, MUNSEY BLDG., WASHINGTON, D. C.

New York Office: 15 W. Forty-fourth St. Telephone: Murray Hill 3830
Chicago Office: 902 Majestic Bldg. Telephone: Central 8744

Subscription Rate, per Year, \$3.00
Single Copies30

VOLUME 7

MAY, 1921

NUMBER 5

SUPPLY AND DEMAND AND THE GOLD INDUSTRY

IF THE GOVERNMENT of the United States had purchased and stored the total production of bituminous coal for a period of thirty years, and had stored this coal at some convenient point, to be turned over to consumers at its cost during the low price era, what chance would the bituminous coal producers of today have to sell coal produced during the present high price level?

Assuming that our annual consumption of coal is approximately five hundred million tons, thirty years production would amount to fifteen billion tons of coal. How many coal mines would remain in operation with a labor cost of \$2.35 per ton if this great storehouse of government coal was offered at the pre-war price, \$1.12 per ton? It is very plain that the coal mines of the country would close and remain closed until this enormous reserve supply had been practically exhausted.

Suppose the government of the United States had purchased and held in reserve at a point convenient to the place of consumption, all of the copper which could be produced during a period of thirty years and should then announce that this copper would be made available to the public at the average price of copper before the war for that thirty-year period of approximately 12 cents per pound. How many copper mines would remain in operation with a necessary production cost of at least 18 cents per pound? Under those conditions, with the government as an active competitor with an enormous supply of cheaply produced copper, would not every copper mine in the country immediately close and remain closed until this great competitor had disposed of the enormous stock in hand?

If President Harding had found, when he became the chief executive officer of the greatest government in the world, that his government had accumulated such enormous stocks of copper and coal that the industrial requirements of the nation could be supplied for a period of thirty years without the production of another pound of either, how would he have applied that doctrine which he has enunciated with such complete approval of all the people of the United States, "more business in government and less government in business?" These questions seem somewhat silly until we apply the same illustration to the present gold situation.

Gold producers are told when they ask government aid to maintain and sustain a healthy gold producing industry that the law of supply and demand will in time bring about the production of as much gold as is required to properly sustain the credits of the world. And yet the government has now in its possession what amounts to a thirty years' production at the highest rate which the country records; and this great supply of gold, three

billion dollars worth, is being sold to the jeweler and other industrial users of gold at the price at which it was purchased by the government during the low price eras of the past.

The gold producers of the nation instead of being able to sell their product in a market controlled by an unrestrained operation of the law of supply and demand are forced to meet the competition of the government in the sales of their product to industrial users. The law of supply and demand does not function as it relates to the gold producing industry; first, because the price of gold is fixed by government regulation and, second, because enormous stocks of gold accumulated during a century period are now available to the consumers of gold for individual purposes at pre-war prices. This situation is one which would call for the most bitter protest if it were applied or made operative in connection with the production of coal, copper or any other of the indispensable commodities in the production of which millions of dollars have been invested, and to the production of which an army of men have been trained for the services of various kinds which are required by the industry. This condition would be horrible enough as applied to a commodity needed by the government only for industrial purposes, but when we consider the great necessity to the government of the maintenance of its gold reserve without depleting the reserves upon which its neighbors predicate their industrial prosperity, a condition arises which is fraught with danger.

THE OPEN SHOP IS NOT A CLOSED SHOP

EVERY CONSUMER is willing to advocate the payment of such wages to labor and the earnings of such profit upon capital as will be fair to both, but his active interest is in making available a supply of life's necessities and luxuries at a reasonable price. A reasonable price to the consumer is possible when and only when the three functions of production, transportation and exchange co-operate in the most efficient way. Now as in ancient times the workmen throughout the temple are idle when there are no designs upon the trestle board. Labor may be efficient and be supplied with all modern machinery and yet be inefficient unless these tools of production are intelligently directed. Effective operation is only possible when those to whom directions are given are required to carry them into effect. The closed shop means insubordination in that the workman is frequently bound by certain rules made by his union which take from the employer the right to effectively direct his operations. Under those conditions inefficiency must result, production must slacken, production costs must increase and the consumer be obliged to pay not only the increased cost of production brought about by inefficiency and insubordination, but a profit upon the cost of that inefficiency to each middle-

man to whom the goods are passed to the final consumer.

A closed shop necessarily means inefficiency. The exceptions to this rule but prove the rule. The unskilled workman does not earn and is not entitled to as much wages as the skilled workman. His wage should be based upon the extent of his skill and efficiency as measured by increased service. Wages are the price paid for service. The best service will only be rendered when a proper recompense is received therefor. The open shop is fair to the workman, is fair to the employer, it best serves the interest of the great body of the American people, and brings to the workman himself the advantage of lower prices in purchasing the necessities of life. An open shop is not a closed shop.

A LOWER WAGE LEVEL

LABOR'S BEST INTEREST in this country lies in its prompt acceptance of wage reductions proportionate to the reduction in commodity values.

During the last twelve months commodity values have undergone a remarkable and spectacular transformation. Production costs—particularly labor costs in those industries which have been able to continue operations—have generally remained at former levels.

Without too literal an analogy, high wages maintained in the face of lowering values and lessening demand result in industrial death—the wholesale closing of plants and the consequent loss of employment to thousands of men.

The extraordinary changes in the values of essential commodities are shown by the following comparative prices quoted in the New York market:

	April 16, 1921	April 16, 1920
<i>Foodstuffs:</i>		
Wheat, No. 2 red.....	\$1.545	\$3.00
Corn, No. 2 yellow.....	.795	1.925
Flour, Minn. patent.....	8.00	15.50
Sugar, granulated.....	.076	.165
Butter, cream, 92.....	.455	.76
Eggs, fresh, firsts.....	.275	.48
Lard, prime.....	10.45	21.25
Pork, mess.....	29.00	42.00
<i>Textiles:</i>		
Cotton, mid, upland.....	12.45	43.25
Printcloths.....	.045	.167

One more fact. A great basic industry—the production of copper—has ceased to function. During the coming months thousands of employees will be without employment. The resulting misery is painful to consider. The potential loss to a world needing greater production constitutes an economic disaster.

Why have the copper mines and smelters closed? Because copper is selling below cost. The following table indicates the answer:

Statistics showing the decline in value of exports of refined copper from the United States for eight months ending February of each year.

	Quantity (lbs.)	Value
1919.....	408,413,090	\$104,708,863
1920.....	355,788,841	75,343,975
1921.....	300,189,947	52,062,230

These figures issued by the U. S. Department of Commerce show that in the eight months ending with February, 1921, 75 percent of the amount of copper exported in 1919 was sold at slightly less than 50 percent of the previous value.

No industry can continue production when the market value is below the production costs.

Labor should recognize the fundamental and unalterable fact that real wages, not money wages, are the index of proper standards of living.

Prompt and immediate acceptance by labor of the principle of wage reductions proportionate to the reduc-

tion in commodity values is a primary and indispensable step in the bringing about of an industrial revival and a return to employment. Failure to recognize this fact can only result in greater depression; will jeopardise the position of labor in the eyes of the public, and will result in economic penalties which the laborer will be the first to feel.

DEPRESSION OF COAL INDUSTRY CONTINUES

THE CESSATION of coal production in England as a result of the menacing strike of the coal operatives, together with the continued depression in the bituminous coal fields in this country, are two factors which, if continued, will result in serious consequences.

A year ago coal production was averaging in the United States about forty million tons per month with a heavy demand far in excess of the productive capacity of the mines. Since the beginning of the present year the demand for coal has dropped to a low level. This has been due to a number of circumstances. The mild winter eliminated a large part of the demand for coal for household use, while the industrial depression has resulted in the elimination of large purchases on the part not only of industrial plants but of the railroads and public utilities.

Figures recently published by the Geological Survey furnish the basis of a comparison of the monthly coal production during the first three months of 1919, 1920 and 1921.

Bituminous Coal Production—Monthly

	1919	1920	1921
January.....	41,487,000	48,689,000	*39,881,000
February.....	31,566,000	40,181,000	*30,697,000
March.....	33,719,000	46,832,000	*30,159,000

*Estimated.

If there should be considerable purchases of American coal by foreign buyers during the coming months and if there is an industrial revival in the late summer together with severe weather conditions in the early fall, the situation in regard to coal supply will be serious and almost inevitably will result in a temporary shortage.

One of the basic reasons for the instability in the coal industry—a factor which has been so injurious both to the permanent coal operator and the public—is the failure of the domestic consumer to purchase his coal during the spring and early summer of the year. Such purchases now would give the consumer the advantage of lower price-levels and would be helpful in enabling the operators to continue production. If the conditions indicated should come about, the resulting scarcity of coal and the consequent high prices will not be the fault of the permanent coal operator, who has been doing his utmost in the face of most difficult conditions to maintain the output.

A NEW FACE AT THE DOOR

THE CONSERVATIVE business interests of the country will be greatly gratified at the initial statements made by the new Secretary of Labor, Mr. James J. Davis.

All patriotic citizens will agree that in free America there is no room for autocracy of any kind, whether it be of labor or of capital. The conception of the Labor Department announced a few years ago by the then Assistant Secretary of Labor that "the Department of Labor is the state department of organized labor" created the impression that the Department of Labor felt itself particularly charged with the duty of building up and increasing the strength and the autocratic power of organized labor. With the unpleasant flavor created by this announcement and the almost uniform efforts to make this theory effec-

tive still in its mind, the public will be greatly gratified at the statement recently made by Secretary Davis of principles upon which all Americans should thoroughly agree:

"A fair deal for capital, a decent living wage for labor, larger profits for farmers through lower railroad shipping rates, and settlement of all industrial disputes through conferences between employer and employe with the golden rule as the basis of settlement." This platform includes a statement that

"Labor must realize that any plan of action or policy that proposes to confer privileges and benefits on one group that are not to be extended to all others will inevitably fail and will, in the long run, bring only suffering and discouragement to the group it was intended to benefit."

Gratifying indeed will it be if the U. S. Department of Labor shall hereafter be conducted for the benefit of all labor, organized and unorganized alike, and in full recognition of the facts as stated by Secretary Davis that

"National stability and prosperity is, therefore, seen to be a problem of maintaining equality and justice between all factors, the worker in production life, the organized worker, the interest of the manufacturer and of the distributor. A policy that will maintain a continuous prosperity for one will maintain it for all."

WASHINGTON AS A NEWS CENTER

THE COUNTRY IS AWAKENING to a tardy realization of what the mining industry recognized several years ago, namely, that Washington is a great news center. The old idea that the Capital provided no worth-while news except of a political nature is about to become dissipated. This evolution in the public's judgment is one of the outstanding features of current comment.

The chief element in news is newness. Nothing which has been told before is a news story. A news center is a place where first-told stories frequently originate, and in this respect Washington is undoubtedly the world's greatest news center. Nearly everything which will be printed in American histories of the future was first told as a news story in Washington.

The first announcement that Hill or Harriman had decided to build or extend a railroad, or that Woolworth would erect a building, was news. Subsequent publication of the completion of plans, of the driving of the first spike, of the laying of a corner-stone, of the holding of dedication ceremonies were but later chapters of an old story. In the modern business world nothing happens; everything is brought about, and things are considered done when competent minds and authorities decree that they shall be done. Decision is the vital thing; all else is mere detail. Announcement that an epoch-marking decision has been rendered is the biggest possible news item. A city in which such announcements are frequently made is a news center, and as an original source of such announcements no other city can even compete with Washington. They are all outclassed, left at the post, beaten before they start.

One might say that New York, with her railroad holdings, her great financial houses and her harbors in which all nations come and go, is a more newsy place than Washington. But no, if New Yorkers want to know whether the ships will land, the railroads lower their rates or the banks tighten up on call money, they must read the news from Washington.

The West, land of gold and silver and copper and romance, comes to Washington for its most important news. The adventurous prospector doesn't even know whether his claim can be patented until he hears from Washington. Gold, silver and copper operators are so vitally concerned in the disposition of certain measures now before Congress that they demand even more news from Washington than is carried in the daily press, and three thousand of them maintain a service of their own.

But what of the South, whose sunny plantations could clothe half the people in the world and feed them all? There is one news item printed every year which is more important to the South than all others combined. That item tells of the government's estimate of the cotton crop. And it comes from Washington. And right now the South is reading eagerly all news about tariff legislation.

Every householder is interested in transportation because it affects the cost of living. Freight rates must be lowered; any revision downward means a wage cut, and this will inevitably bring about the danger of a nationwide strike. When this danger becomes imminent nothing in the daily press will be quite so important as the news about it. When it becomes positively known that a strike has been averted, or, if one is called, that it has at last been settled, the news of that event will be telegraphed from Washington.

The biggest piece of news printed during the world-war was the announcement that America had joined the fray, because it foretold the inevitable outcome. Hostilities ended more than three years ago, but there is still no peace, and there will be no peace until the world knows what Washington will do. A few weeks ago one of the statesmen of France came to Washington to get the latest news.

Not only in New York, Chicago, San Francisco and New Orleans, but in Berlin, Paris, London, Honolulu, Peking, Calcutta and Tokyo the Washington date-line commands front-page prominence in all the newspapers. Cut the telegraph wires from Washington and not an important step would be taken in the industrial or financial world until they were restored.

Whether we like it or not, the world takes its orders, and therefore gets its news, from Washington. What many an American business man has overlooked is that the complexion of his balance-sheet is manipulated in Washington, instead of at his plant or factory. Many a prosperous concern has found too late that the thing that turned an anticipated profit into a loss was some little thing which transpired in Washington. But the wisest business men now keep abreast of everything done in Washington.

The mining industry came to Washington several years ago in the knowledge that by so doing it would be right in the middle of everything, and the MINING CONGRESS JOURNAL was established in the firm belief that Washington was the original source of the world's most important news. The wisdom of each move has been fully confirmed.

OIL AND THE COLOMBIAN TREATY

IT IS REFRESHING and encouraging to know that we have a President and a Secretary of the Interior and a Senate leader who are not afraid to help big business.

President Harding asked the Senate to ratify the Colombian treaty. At once the cry was heard, "The oil interests are behind it." Equally as promptly Senator Lodge told his colleagues, "I do not know whether they are or not," but the President has recommended ratification and "I earnestly hope that such will be the view of the Senate." And Secretary Fall, who has heard the same charge reiterated for more than a decade, wrote a letter in which he said, in substance, that whether oil interests were behind the treaty or not they certainly ought to be, and so ought all Americans whose eyes were open and whose patriotism was working. Remarkable as it may seem, neither of the three has as yet been accused of being "controlled" by outside and ulterior influences.

For entirely too long the demarcation between success and failure was considered identical with the dividing line between good and evil. The little business man and the

failure in life were always honest, the successful individual and the big corporation were always soulless, and if perchance the latter dealt in oil it was not only soulless but its money was tainted. Hostility to huge corporations was always more or less baseless and indulged in mainly by demagogic officials to curry the favor of uninformed constituents. It is a tribute to the rising plane of public intelligence that such buncombe is not as effective as formerly and is becoming less and less popular.

The war taught us many lessons, not the least important being that giant corporations are public servants indispensable for supplying the manifold needs of a country as large and prosperous as the United States. More emphatically since the war than during the war the public has been reminded that this is an oil age and that the oil resources of the United States must be supplemented by investment of American producing concerns in other countries.

Senator Lodge and Secretary Fall have taken the logical, sensible, patriotic view of the situation. If the legal and international questions involved warrant the ratification of the Colombian treaty, it should be ratified, and the circumstance that several American oil companies may become richer as a consequence should not militate against it. Indeed, it should be considered as an argument in favor of ratification, since an avowed purpose of maintaining amicable relations with foreign countries is that American commerce with all the world may flourish. Naturally, our foreign commerce will not be profitable unless we take in exchange for our own goods commodities of which we stand in need. Oil is undoubtedly one of these commodities.

THE ONE BIG UNION

LITTLE HAS BEEN HEARD in the United States during recent months concerning the one big union. The idea, however, is not dead and its advocates have not lost heart in the ultimate accomplishment of their purpose. They are now "boring from within." A recent expression of this purpose has been made public in a declaration by the British miners' reform movement, the immediate objects of which are:

1. Full wages during times of compulsory unemployment.
2. Five working days a week and a six-hour day.
3. Resistance to local and national reductions.
4. The abolition of piece work.
5. The abolition of the income tax and other impositions on workers.
6. A full wage as compensation for accidental disablement.
7. An annual holiday with pay.

This statement calls attention to the fact that during the war the workers were called "soldiers of industry." Soldiers are paid to be ready to fight and therefore the employers must pay the workers to be ready to work. This latter thought may be the impelling motive which leads the American Federation of Labor to undertake another campaign for the unionization of the steel industry.

At this time the demand for steel products is not such as to justify the full operation of the several steel-making plants. If the industry can be thoroughly unionized and if the industry may be charged with the service of 60 percent of its usual force which is not employed, the cost of steel would naturally be doubled, which would quickly put the whole industry out of commission. The building trades, not being able to purchase the high priced steel, would be called upon to pay their men for readiness to serve and not for actual service and from one line of work to another the interdependent condition of industry would gradually put all men out of work and all men upon the pay roll for readiness to work. Just who is to pay the bills is a difficult question to answer.

OHIO VERSUS RUSSIA

FRED LOUDNER, coal miner, member of Local Union No. 4,196 of the United Mine Workers of America, would probably find it a difficult task to explain wherein free speech and personal liberty in Nelsonville, Ohio, differed from censorship and thralldom in Russia. According to the *United Mine Workers' Journal*, he has been suspended from his local union for twenty-five years for conduct unbecoming a member, his offense consisting of circulating among his fellow workmen a paper reading as follows:

"We, the miners of mine 208, owing to the great depression in business, agree to mine coal during this time of depression for \$1 per ton, without any additional for wet coal, yardage, room turn, or any other extras. We also agree to keep up all entry work for the price of \$1.12 per ton. These prices to hold good during the time of depression. All coal mined to be clean, merchantable coal."

All contracts are sacred and should be sacredly kept. Neither party to a solemn agreement has a right to break his pledge, but there is nothing illegal, unreasonable or unjust in either party's seeking a modification of its terms. To deny the right to request revision is to withhold the right of contract itself, and to penalize another for exercising this privilege amounts to the deprivation of the right of contract, the right of free speech, the right of liberty and the right to pursue happiness. The action of the Nelsonville union in abridging the constitutional rights of one of its members is utterly indefensible.

Had the demand for coal suddenly become greater, and had the operators offered to the miners a bonus over and above the contract wage scale as a stimulus to more production, would the union have become incensed? Would it have resented the suggestion that the wage contract be in any respect changed? It is regrettable, but true, that an outsider conversant with Middle West history of the last year is tempted to think that they not only would not have displayed such passionate devotion to the letter of their agreement, but might even have taken a "vacation" as a reminder that times had changed since the agreement was entered into.

In Russia, the workman who disagrees with his comrades of the soviet is suspended from a gallows or otherwise removed. In Nelsonville, he is suspended from the union for twenty-five years, which is equivalent to expulsion. In either case, the oppressor inflicts the heaviest penalty at his command. The difference between justice as dispensed by soviet Russia and that dealt out by the Nelsonville union lies not in the hearts of the administrators, but in the power they exercise.

MINNESOTA'S OCCUPATION TAX ON IRON MINING

RECONSTRUCTION WILL NOT be brought any nearer, the cost of living will not be reduced, and the return of business to normalcy will not be hastened through the enactment of such measures as the six percent occupation tax on iron mining which has just gone into effect in Minnesota. If the companies survive the blow, the consumer will pay the bill through continued high rent, continued heavy transportation charges and continued top prices for all of the thousand and one necessities of life of which iron and steel are constituents.

Persons not familiar with the details of the measure may draw a fairly dependable conclusion as to its inherent evils from the fact that Governor Preus received seven hundred telegrams protesting against it. It is comparatively easy to rally a large following for any proposed law but difficult to rouse the opposition to concerted action. Not often, perhaps not once in a decade, is any proposed

state law so altogether bad as to excite the active opposition of seven hundred thinking business men.

The new levy will be in addition to local taxes assessed against mining companies by towns and cities and in addition to the state *ad valorem* tax. Broadly speaking, it requires mining companies to perform all the duties performed by other citizens and then to pay a bonus for the privilege of being progressive, loyal and successful. Neither in Minnesota nor the United States as a whole has the mining industry done anything calling for such discriminatory treatment.

An occupation tax penalizes industry and subsidizes indolence. Levied against those engaged in a basic industry, it passes its burdens down the line through all stages of production, transportation, manufacturing, distribution and on to the ultimate consumer. It cannot be justified. For the state of Minnesota a long legal battle is in prospect, and for iron ore operators several months, perhaps years, of struggling against uncertainty and handicaps at a time when the country needs their utmost efforts, unhampered and unrestricted.

BUSINESS FAILURES LESS THAN NORMAL

DURING THE RECENT PAST startling headlines in many of the papers of the country announced that during the first three months of the current year business failures in the United States averaged 4,870 and comment is made in such a way as to indicate a belief that this is an extraordinarily large number of failures and that conditions tending towards a business panic exist. As a matter of fact there is nothing unusual in this statement and in fact a much larger number might reasonably have been anticipated.

During the five years beginning with 1912, ending in 1916 the average number of failures during the first three months of each of those years was 6,678. It is a matter of great congratulation that, during a time of radical readjustment, when the traders of the country were stocked with goods bought at high price levels, so few failures have occurred. The small number may in part be accounted for by the fact that while wholesale price levels have greatly decreased, the necessity of retailers to sell their goods somewhere near cost is enabling the country to descend to normalcy gradually and with so little financial danger.

REQUIESCAT IN PACE

THE INDIANA special Food and Coal Commission has ceased to exist. It was a lusty child while it lived, for in eight months it spent approximately \$30,000, half of which is reported to have been paid out in attorney's fees, and accumulated an additional \$70,000 which the state of Indiana will inherit. But the legislature which created it provided that it should expire on March 31, 1921, unless in the meantime something should be done to prolong its life, and from the day of its birth it was such a nuisance to all the neighbors that near the end Governor Warren T. McCray decided it was not worth saving.

In behalf of the commission it was claimed that its operations would effect "enormous savings." The final report of the commission omits all reference to the fulfillment of the prediction. But it is known that in eight months it collected \$100,000 in tonnage taxes and license fees from the operators. Consumers or operators, or both, undoubtedly sustained a direct financial loss to this extent.

Now that Indiana has seen the light, it is to be hoped that its rays will penetrate to other states where like darkness prevails.

NATIONALIZATION OF MINES OPENLY ADVOCATED IN WASHINGTON

IT IS TIME TO BE ON GUARD. The standard of bolshevism, pure and undefiled and undisguised, has been raised in Washington and the seizure of American mines is being openly advocated.

Sixteen "associated, recognized, standard railroad labor organizations" publish in Washington a weekly newspaper known as *Labor*. This organ is not published for profit and it receives such powerful support from the unions that it does not need to accept paid advertising. In a recent issue, under the heading, "A Plan for Nationalization of Mines," this paper carried an editorial the first paragraphs of which were as follows:

"In our old school geographies it was called Bohemia. It was a part of the Austro-Hungarian empire then. Now it is the Republic of Czecho-Slovakia and in many respects it is the brightest spot on the map of Central Europe.

"While its neighbors have been wasting their substance on wars and the maintenance of ambitious military establishments, Czecho-Slovakia has been minding its own business, laying the foundations of a representative democracy and quietly developing a plan for nationalization of essential industries.

"A bill to nationalize the mines has been placed before parliament. It contains many interesting features. The mines, as well as the enterprises pertaining to them, such as plants for the manufacture of coke and natural dyes, are to be nationalized."

Then follows a catalog of the "interesting features," the most interesting of which is that owners of confiscated property valued at more than 1,400,000 crowns will be indemnified only fifty percent of their losses, and this at the rate of one percent a year for fifty years. The concluding paragraph of the editorial in *Labor* reads:

"It will be seen that this plan is a near approach to the scheme for government ownership and democratic control advocated by railroad workers in this country."

The above constitutes a double confession in that it shows that *Labor* and the members of the sixteen powerful railroad unions which it represents believe (1) that the Plumb plan, which they advocate, is a "near approach" to bolshevism; (2) that Bohemian bolsheviks in stealing the mines were merely "minding their own business."

To raise an army for bolshevism and revolution in America it is not necessary to hang out a red flag, enroll the "comrades" and distribute bombs among the volunteers. It is not even advisable. And to prepare the way for eventual seizure of American railroads and mines it is not necessary to say, in so many words, "Rise, comrades, and take possession." That also would be inadvisable. But the same message is conveyed by innuendo through printing a newspaper story that Hungarian workmen are seizing their employers' property and making the editorial comment that in so doing they are attending to their own business and making their country a "bright spot." The suggestion that American workmen should in like manner convert this country into a "bright spot" is clearly discernible, and was manifestly intended to be. It does not take a Philadelphia lawyer to interpret such an editorial as an out-and-out advocacy of the seizure of American mines.

It is time to be on guard. The enemy is not at the gates, he is within the gates, posing as a law-abiding working man whose theories about government and economics are slightly different from our own. Yet a little while, if permitted to operate unhindered, and he will have converted others of the idle and the indolent to his way of thinking—and acting. It is time not only to be on guard, but like sensible Americans to meet the issue. Otherwise, the issue may suddenly become an army.

THE PRESIDENT'S MESSAGE

NOTHING PARTICULARLY NEW or startling was observable in President Harding's first message to Congress, and in this circumstance is one of the elements of strength manifest in the document. The new administration went into office on a platform calling for certain definite performances and the Executive's initial communication to the Legislative Department was in the nature of a reminder that now is the time to make good. That was all, and that was enough.

"Back to business" was a winning slogan in the campaign of last November. It was a leading thought in the President's inaugural address. It stands out in every paragraph of his message, in nearly every sentence, and is seen between the lines.

Revision of existing tax laws and enactment of protective tariff measures must of necessity be parts of any reconstructive program, for there can be no profitable business without the former and no business at all without the latter. The emphasis given by the President to this character of legislation and to other sorely needed enactments was by way of amplification of the general program. The administration has a contract with the people. In demanding national economy, settlement of transportation problems and an American peace the President laid out the table a draft of plans and specifications for carrying out the agreement.

The whole will of the people and the full purpose of the President were summed up in the latter's invitation to the House and Senate to join with him "in the efforts to find our normal, onward way." The mining industry joins devoutly with the President in the hope for early attainment of this aim.

EMERGENCY TARIFF BILL

THE RAPIDITY with which Congress took action upon the Emergency Tariff and Anti-Dumping bills will have a desirable effect in enabling the country to go from the higher price level to a more nearly normal rate by a less precipitous route and therefore with greater safety. At no previous time in history have conditions been such as to permit so radical a drop in the average price of all commodities without producing an industrial panic.

The steadying effect of the Federal Reserve Bank System, the effort of retailers to sell high-cost goods with as little loss as possible, the holding back of cheaper production from the consumer, has really been of great advantage in that an industrial crisis has been avoided. The enactment of the Emergency Tariff Bill is an evidence of the desire of the administration and Congress to get from the mountain peak to the valley by a circuitous route and to avoid falling over the precipice.

The Emergency Tariff Bill is what its name implies, an emergency bill. It is believed that the present session of Congress will enact a regular tariff bill which will meet the necessities of normal conditions or at least those conditions which are likely to prevail for a few years and until a change in the law may again seem advisable.

IMMENSE COAL RESERVE

THE BULL MOUNTAIN coal field, in Musselshell county, Mont., according to an estimate made by the United States Geological Survey, contains nearly five billion tons of coal. A small part of this immense reserve of coal has already been mined, but by comparison with the total in the ground, the quantity mined is practically negligible.

DR. BAIN APPOINTED DIRECTOR OF THE BUREAU OF MINES

DR. H. FOSTER BAIN was appointed director of the Bureau of Mines by President Harding on April 16. Dr. Bain had been serving as acting director since the resignation of Dr. Cottrell. He was appointed by President Wilson, but not confirmed. His reappointment by President Harding and confirmation by the Senate have been confidently expected. When the appointment was made he was on a tour of the Bureau's experiment stations.

EX-GOVERNOR HOOPER REPRESENTS PUBLIC ON RAILROAD LABOR BOARD

VACANCIES on the Railroad Labor Board were filled by President Harding April 16. Ben W. Hooper, formerly governor of Tennessee, was appointed to represent the public group; Samuel Higgins of New York, to represent the management group; and Walter McMeniman to represent the labor group.

Mr. Hooper, who represents the public, was formerly heavily interested in Oklahoma oil properties. He is the only Republican who was ever elected governor of Tennessee twice, and had been prominently mentioned for appointment as Commissioner of Internal Revenue. Mr. Higgins was formerly General Manager of the New York, New Haven & Hartford Railroad. Mr. McMeniman is deputy president of the Brotherhood of Railway Trainmen, and was recently called into conference by President Harding.

FEBRUARY REFINERY STATISTICS

THE CRUDE RUN of refineries during February amounted to 22,411,819 barrels, and the total of oils purchased and re-run was 1,420,415 barrels, Bureau of Mines figures. Output during the month was as follows: gasoline, 13,863,866 gallons; kerosene, 5,824,354 gallons; gas and fuel oil, 26,162,229 gallons; lubricants 2,586,865 gallons; wax, 1,442,300 lbs.; coke, 1,965 tons; asphalt, 2,661 tons; miscellaneous, 4,288,420 gallons; losses, 51,442 barrels.

There were 291 refineries in operation, with a daily capacity of 1,692,090 barrels. This was a reduction of 20 operating plants and 28,935 barrels in daily capacity as compared with January.

Daily average production of gasoline was about 1,000,000 gallons less than in January, but stocks of gasoline were increased during the month by approximately 108,000,000 gallons. This amount was 117,000,000 gallons more than stocks for the same date in 1920, and was the largest stock of gasoline on record.

SURVEY TAKES STOCK OF COAL SUPPLY

STOCKS OF COAL in the hands of consumers on April 1 will be tabulated by the Geological Survey, acting upon orders of Secretary of the Interior Fall. The survey during the last month sent out questionnaires to all large consumers calling for reports of stock on hand January 1, coal received from January 1 to March 31, coal consumed during the same period, estimated losses from shrinkage, fire or other causes, and amount still on hand April 1. The report is to cover bituminous and lignite, but not anthracite.

Results of this questionnaire will, it is believed, settle the controversy as to whether coal reserves above ground are below or above the safety line. It has been claimed that consumers are digging too deeply into their reserves.

WORLD OIL CRISIS AS VIEWED IN CONNECTION WITH COLOMBIAN TREATY

THAT A SERIOUS CRISIS exists with relation to the oil supply of America and the world was asserted by Senator Henry Cabot Lodge of Massachusetts, in an address before the Senate on April 12, as a controlling argument in favor of immediate ratification of the Colombian treaty. In support of his own position, the Senator read a letter from Secretary of the Interior Fall which has been pronounced the most exhaustive analysis of the oil situation, as affected by rivalry between the United States and Great Britain, which has yet been made.

By agreement during the Sixty-sixth Congress, the Colombian treaty was given the right of way during the first days of the extra session. It was ratified April 20 by a vote of 69 to 19.

The "charge" that American oil interests were behind the Colombian treaty was mentioned by Senator Lodge, who asserted he did not know whether they were or not but that he did know the question of oil was a vital one and that American investors in Colombian oil properties should have protection and encouragement. He discussed the ever-increasing importance of oil both in business and as a factor in the national defense, and insisted that American developments in Colombia would pass into the hands of British interests unless our investors could be made to understand that they would be protected.

"This," he said, "is one of the important features of good relations with Colombia and with all South America, but particularly with those countries in the north where the oil fields are said to lie."

In his reference to the oil situation, Senator Lodge spoke as follows:

I have heard it said that the oil interests are supporting this treaty. I do not know whether they are or not. No one interested in the production of oil has ever spoken to me on the subject so far as I am aware, but I know, and everybody else who has studied the subject knows, that the question of oil is one that is vital to every great maritime nation. Oil goes much beyond the mere economic value of the trade or of the production. The use of oil-burning engines both in merchantmen and in ships of war makes it vital to the carriers of our commerce and, what is still more important, to our power of defense by sea. Our own production of oil, great as it has been, is beginning to show undoubted signs of limitation both in the life of the wells and the amount of production. It would be a very serious matter to this country, incalculably grave, if we are cut off by the government competition of other nations from an increasing oil supply. I am entirely against having the United States invest money in any enterprises or enter into business of any kind. I do not believe that this would be a sound system for our Government to pursue. I think, however, that it is absolutely necessary that we should give to American investors in foreign countries the protection which American citizens in other countries are entitled to so long as they obey the laws of the country in which they may be operating.

We must stand behind our own people wherever they may be in the world, whether in business or merely as travelers. In this direction the United States has been careless and indifferent and in some instances, notably in Mexico, much worse than careless. If we are to extend our foreign trade in South America and the East, Americans who invest their money in those countries and who live according to the laws of the foreign country in which they are placed must always

be sure that they have behind them their own Government and that they will receive the protection to which they are entitled. Our Government in the past has in certain cases actually gone to the point of taking the position that an American citizen or an American corporation making investments in another country was not entitled to any protection, that they were to be frowned upon instead of being encouraged. I regard this as an absolutely false policy, and if we persist in it we shall not only make the expansion of our commerce impossible but we shall find ourselves very much weakened in securing those articles necessary to our business life and to the life of our people, like oil, rubber, and other great raw materials of equal importance. If American capital is willing and ready, with the assurance that their rights are to be protected in foreign countries, to invest in those countries and thereby develop and enlarge our trade, it should be encouraged and praised, not berated and attacked. So far as oil is concerned I wish the Senate would examine the table which has been prepared in the Interior Department, copies of which are here for the use of Senators. I would have them see graphically the manner in which England is taking possession of the oil supply of the world.

Mr. Chamberlain announced the other day in the House of Commons that England still controlled the Anglo-Persian Company and England also controls the Royal Dutch and Shell Transport combination, whose holdings are exhibited in the table. We must not only enlarge our trade, but we must enlarge our sources for a supply of oil wherever it is possible to do so, and we can not do it if we take the position that it is a sin for Americans to make money and that those who are

engaged in foreign investment and foreign commerce are to be punished instead of being sustained. If Americans are willing to put in large amounts of capital for the production of oil, they are entitled to make money, and I hope they will. The Government will not be involved financially, but will simply be called upon to do what every other government does and what we ought always to do—protect its citizens in their lawful trade in other countries. The indications are very strong that the very large oil fields, perhaps the largest in the world, are on the point of development in Venezuela and Colombia. American companies have already started in Colombia, but they will pass into the hands of the powerful British combination if our people can not at least understand that they will be protected against wrong and injustice if they invest in countries other than their own for the purpose of furnishing the United States with oil and enlarging our commerce. This is one of the important features of good relations with Colombia and with all South America, but particularly with those countries in the north where the oil fields are believed to lie. These are some



SENATOR HENRY CABOT LODGE

of the arguments which seemed to me very strongly to justify, in fact to demand, the ratification of this treaty.

Secretary Fall, who, as Senator, became intimately conversant with the Colombian treaty during the Roosevelt administration, was even more emphatic, if such were possible, than Senator Lodge in emphasizing the necessity for supplementing America's oil supply. He said he had been particularly impressed by the seriousness of the present crisis with relation to oil throughout the world, also with the way Great Britain was meeting the crisis, and added: "It is high time that Americans should understand the situation and as patriotic Americans deal with it."

Two letters from Secretary Fall were read by Senator Lodge. One dealt with political considerations involved in the Colombian treaty, the other exclusively with the oil crisis. The latter follows:

HON. HENRY CABOT LODGE,

United States Senate, Washington.

MY DEAR SENATOR: As I have set forth in the accompanying communication to you, explaining Col. Roosevelt's attitude, as I understood it, I have learned that the claim is made that the sentiment, or efforts, in behalf of the ratification of the present Colombian treaty, with amendments, pending, is brought about by propaganda in favor of American oil companies, or other interests.

I can not speak for others, but I may say for myself that I am most thoroughly impressed with the seriousness of the present crisis with relation to the oil developments throughout the world.

I say "crisis," and desire to emphasize "crisis" as the proper expression to use under the circumstances.

The people of the United States have for years been bombarded with all kinds of statements concerning the "predatory" oil interests of this country and the fact that such selfish interests have endeavored to force this country even into a war for the purpose of protecting their "dirty dollars" or of adding to the wealth of conscienceless, piratical, American oil adventurers and monopolists.

Various bureaus and departments of this Government have endeavored, particularly within the last two years, to throw some light upon true conditions with relation to oil, and to arouse the patriotic American people to the realization that truly we are confronted with a "crisis" which will have a serious influence upon the future prosperity and actual safety of this country as the "crisis" may be met and dealt with intelligently or otherwise.

It is true that American oil men are the pioneer prospectors in the oil fields of the world; it is true that oil drills and oil machinery, managed by Americans, are in use in every oil development on the face of the earth; it is true that geologists attached to the staff of one of the departments of this Government are, when not immediately needed, loaned to oil companies or individuals, on furlough, without pay, and that their reports, brought back from Africa, South America, Asia, and Europe, furnish a more or less comprehensive understanding of the oil situation and of the "crisis" of which I speak.

Other nations are aware of the seriousness of the situation, and Great Britain learned at least one lesson from the recent war. That is to say, that the nation which controlled the oil industry controlled

commerce by sea, in view of the fact that no coal burner can compete with an oil-burning ship.

Realizing this, Great Britain, the nation, has, within the last two years particularly, followed a policy which she had adopted in many of her provinces many years ago, that is, of excluding Americans from or placing heavy burdens upon such Americans or other foreigners in any British oil field.

Within the last two years, however, taught by the lessons of the war, Great Britain has deliberately pursued a policy of obtaining governmental control of all the great oil companies in which British subjects had been interested, and, going beyond this, has secured practical, if not sole, control of the great "Royal Dutch-Shell," and other foreign companies, particularly through what is known as the "Royal Dutch-Shell Group" combine, which was effected in January, 1907.

Of course, it is impossible to give exact figures, but our Government, through at least two of its departments, has information satisfactory beyond question, that the British Government actually controls the "Royal Dutch-Shell" combine, 60 percent of the stock of which is owned by the Royal Dutch, and 40 percent of whose stock was owned by the Shell Transport & Trading Co. (Ltd.).

I am handing you herewith several copies of a very striking diagram, prepared by the Department of the Interior of the United States, from information obtained through our geologists and other entirely reliable sources.

You will at once note the extensive holdings of this British national enterprise in the States of Oklahoma and California in the United States.

You will notice in the extreme left portion of this diagram the British companies which are operating particularly in the Island of Trinidad and Venezuela.

In the lower right-hand portion of this diagram you will find the interlocking British National companies which control British petroleum holdings in the Republic of Mexico.

The Mexican Eagle Oil Co. (Ltd.), known to us as the "Aguila" company, is the principal "Cowdray" company in Mexico.

Allow me to call your attention here to a most significant matter which has recently occurred, i. e.:

The British Government and the French Government have each repeatedly protested to the Mexican Government, from time to

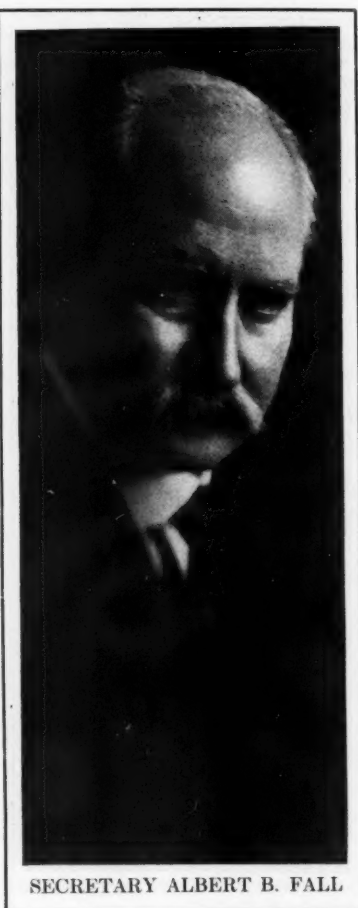
time, along exactly similar lines to the protests made by this Government concerning the confiscatory decrees of the Mexican Government under the Constitution of 1917, proclaimed by Carranza, and being followed by Obregon.

These protests yet stand as the official last word of Great Britain and France, as exactly similar protests yet stand as our last word to that country.

The Mexican Eagle Co. ("Aguila") has been a member of the American Association of Oil Companies and has for years co-operated with this association in making protests against confiscatory decrees in Mexico, both from the British Government and the American Government.

Recently, within the last three months, the "Aguila" Co. finally notified the American association that it proposed to pursue its own lines and make its own terms with the Mexican Government, accepting the Mexican Government's demands with reference to oil drilling permits, etc.

This came as a shock out of a clear sky, and I am informed that after certain protests made by the association and by the American



SECRETARY ALBERT B. FALL

companies, the Mexican Eagle ("Aguila") Co. has not, in fact, obtained titles under this confiscatory decree, upon properties belonging to others, but, yet, has not countermanded instructions to its agents in Mexico to obtain such titles from time to time.

Nevertheless the British protest still stands and Great Britain is ostensibly acting with the United States officially, in identical official protests against the constitution of 1917 and decrees under it.

The British "Aguila" Oil Co., owned, as a matter of fact, by Great Britain herself, is, however, yielding to such decrees and obtaining advantage of American companies, who are faithfully abiding by the advice and instructions of the American Government in the matter.

British oil interests are giving every assurance to Obregon, and Mexican officials, of their support and friendly co-operation, seeking advantage against or over American companies, while the British Government, owning this oil company, is ostensibly standing by the United States Government in its action.

I bring these matters to your attention, and am furnishing you with the diagram referred to, for the reason that it is high time that Americans should understand the situation and as patriotic Americans deal with it.

I am also handing you herewith a map of the world, showing, most graphically, the situation with reference to oil, as such situation is being influenced by the Royal Dutch-Shell combination.

Extending from Holland and England, you will notice the lines of the industries of this combination reaching all over the world.

From the best information obtainable the actual investments in money and value of property of British nationally owned oil companies, are practically double in amount the capitalization of all American oil companies operating in the United States and elsewhere.

The American oil developer and producer in the United States, in Mexico, in Mesopotamia, in Africa, in South America, and elsewhere, working by himself, with practically no protection from his Government, and abused and vilified by American authorities in high place, must come in competition with the great British nation, realizing its duty to itself and encouraging and supporting its citizens with national funds wherever they may be able to obtain a footing through private manipulation or national influence in every country of the world.

Great Britain, as usual, has a policy of upbuilding and assisting its citizens in upbuilding the nation, while the American has no protection, and many of its prominent men are engaged, as usual, in retarding every effort of the individual citizens of this country in their individual development, and objecting to any protection of them as American citizens.

The Royal Dutch Shell combine, owned by Great Britain, as will be seen from this map inclosed; from the diagram handed you, and from the list of producing, etc., companies attached to this map, controls the oil fields of Venezuela which are developing by leaps and bounds into magnificent, wonderful oil producers.

Adjoining these Venezuela fields to the east, lie the Colombian oil fields, as yet largely undeveloped, and which can never be developed properly except by the investment of tens of millions of dollars in the construction of pipe lines to the seacoast.

American oil men are pioneers here as in Venezuela.

Colombia, hoping for close relations and practical co-operation with us, based upon mutual interests in the Panama Canal and ocean-trade routes, has, during this last Colombian administration particularly, been exceedingly friendly to American investors and has not received the advances of British capitalists with the same degree of favor.

Americans are heavily interested in Colombia, where indications are that one of the great oil fields of the world may, at an early date, if these Americans are properly protected, add its wealth to that of this country.

In Latin America, as in the Orient, trade follows the investment.

During the great war Latin-American trade could only seek American markets and to-day the United States is in the position where, if by governmental policy it assists its citizens in the matter of mere protection in their investments, the United States can bind to itself

the great trade of this hemisphere, 80 percent of which has, prior to the war, gone to enrich the countries of the Old World.

Thus far it is undoubtedly true that American oil interests are much interested in the friendly settlement of all outstanding difficulties with Colombia and in drawing more closely the commercial relations of the two countries through political friendship.

Activities of the oil companies are directed, generally, by intelligent, broad-minded American business men, who, of course, realize as do other thinking American citizens, that upon governmental action largely depends the success of individual investment and consequent trade wealth.

Believing, as Theodore Roosevelt and others believed, that friendly and very close relations with Colombia are absolutely necessary for the safety of the Panama Canal, and of American interests, and realizing as they do, that friendly relations between the two Governments must exist as a preliminary and as prerequisite to the development of Colombia's natural resources by American capital, it is doubtless true that American oil companies are urging ratification of the present treaty.

The matters just referred to—that is, the fact that Great Britain as a nation has gone into the oil business since the report of the Senate minority was made in 1917, show such a change in conditions since the latter date as will justify very serious thought and even serious effort to meet conditions as they now exist.

In other words, world conditions and international conditions on this continent have changed exactly as they have changed throughout the world. Each country is now called upon to meet these changed conditions.

We are more justified now than we were, even in 1917, therefore, in going to any extreme which our self-respect and our great respect and love and honor for the great American, Roosevelt, will justify in carrying out that great American policy which he so clearly understood, even if some person not understanding conditions and misunderstanding his attitude may criticize us as having changed our own opinions at the dictation of some greasy oil corporation.

Remember this, Senator, the American investor in the Orient must come into competition with the Japanese Government in all trade activities; American oil developers and producers must come in competition, throughout the world and upon his own soil, with the great British Government as a Government engaged in the same activities. Have not conditions changed?

Are we not justified in reconsidering preconceived ideas based, possibly, upon an erroneous understanding of the then existing conditions and concerning which conditions at least have changed during the last two years?

Most sincerely, yours,

[Signed] ALBERT B. FALL.

COLOMBIA'S DISCRIMINATORY LAWS HAVE BEEN NULLIFIED

IN AN ADDRESS to the Senate urging ratification of the Colombian treaty, Senator McCumber of North Dakota referred to the decision of the Colombian Supreme Court confirming the constitutionality of mineral concessions to American citizens. He said the good faith of Colombia toward the United States has been manifested in this decision concerning the rights of Colombia to its vast mineral oils. Under the old Spanish law all minerals in her possession belonged to the state. When Colombia became an independent state, it became possessed of all rights to minerals therein. After Americans had obtained large concessions and oil interests in Colombia, it was declared by the Colombian government that these oils, wholly unknown to Spain and to the world in olden times, came under the designation of minerals and should be controlled by the Colombian government.

This claim was protested by Americans and the Senator said it was well understood by Colombia that the United States would not make a treaty with her unless Colom-

bia's claim to the mineral lands, which had been asserted only after large concessions had been granted and vast sums spent in development, was repudiated. The Colombian Supreme Court finally confirmed the constitutionality of the concessions granted to American citizens and repudiated the claim that petroleum oil was a mineral in the sense used in the old Spanish law and the Colombia constitution and as such the property of the state. The Senator said this decision was of great value to American citizens and was no doubt desired by Colombia to clear the way for the treaty.

Senator McCumber said he was influenced in favor of the treaty by the immense opportunities which would be opened up to American capital and commerce in the development of the vast oil fields of Colombia, as the United States was intensely interested in the future world's supply of petroleum. He said if reports are to be relied upon, no place in the world has potential possibilities of oil supply comparable with those of Colombia. The United States should protect American rights in the South American Republics, he said, and therefore should ratify the treaty.

SENATE COMMITTEES

ALL SENATE COMMITTEES were appointed April 18, and are as follows:

Agriculture and Forestry: Messrs. Norris (chairman), Page, Kenyon, Wadsworth, McNary, Capper, Keyes, Gooding, Ladd, Norbeck, Smith, Ransdell, Kendrick, Harrison, Heflin and Caraway.

Appropriations: Messrs. Warren (chairman), Smoot, Jones (Washington), Curtis, Kenyon, Hale, Spencer, Phipps, Newberry, McKinley, Overman, Owen, Culbertson, Harris, Glass and Jones (New Mexico).

To Audit and Control the Contingent Expenses of the Senate: Messrs. Calder (chairman), McCormick, France, Jones (New Mexico) and McKellar.

Banking and Currency: Messrs. McLean (chairman), Page, Frelinghuysen, Penrose, Calder, Newberry, Weller, Norbeck, Owen, Hitchcock, Pomerene, Fletcher, Kendrick and Glass.

Civil Service: Messrs. Sterling (chairman), Cummins, Colt, Ball, Nicholson, Stanfield, Bursum, McKellar, Ransdell, Wolcott and Heflin.

Claims: Messrs. Spencer (chairman), Frelinghuysen, New, Capper, Gooding, Harreld, Ernst, Stanfield, Robinson, Trammell, Wolcott, Broussard and Watson (Georgia).

Commerce: Messrs. Jones of Washington (chairman), Nelson, Fernald, Calder, Lenroot, McNary, Ball, Edge, Willis, Weller, Fletcher, Ransdell, Sheppard, Simmons, Dial and Caraway.

District of Columbia: Messrs. Ball (chairman), Dillingham, Capper, Elkins, Gooding, Cameron, Weller, Pomerene, King, Sheppard, Glass and Stanley.

Education and Labor: Messrs. Kenyon (chairman), Borah, Sterling, Phipps, Warren, Kellogg, Shortridge, Jones (New Mexico), McKellar, Wolcott and Walsh (Massachusetts).

Enrolled Bills: Messrs. Sutherland (chairman), Ball and Dial.

Expenditures in the Executive Departments: Messrs. McCormick (chairman), Moses, Willis, Oddie, Underwood, Swanson and Robinson.

Finance: Messrs. Penrose (chairman), McCumber, Smoot, La Follette, Dillingham, McLean, Curtis, Watson, Calder, Sutherland, Simmons, Williams, Jones (New Mexico), Gerry, Reed and Walsh (Massachusetts).

Foreign Relations: Messrs. Lodge (chairman), McCumber, Borah, Brandegee, Knox, Johnson, New, Moses, Kellogg, McCormick, Hitchcock, Williams, Swanson, Pomerene, Pittman and Shields.

Immigration: Messrs. Colt (chairman), Dillingham, Penrose, Sterling, Johnson, Keyes, Willis, King, Harris, Harrison and Watson (Georgia).

Indian Affairs: Messrs. Curtis (chairman), La Follette, McNary, Spencer, Harreld, Cameron, Ladd, Ashurst, Owen, Walsh (Montana) and Kendrick.

Interoceanic Canals: Messrs. Borah (chairman), Page, Colt, Knox, Johnson, Edge, McKinley, Walsh (Montana), Simmons, Trammell and Ransdell.

Interstate Commerce: Messrs. Cummins (chairman), Townsend, La Follette, Poindexter, McLean, Watson, Kellogg, Fernald, Frelinghuysen, Elkins, Smith, Pomerene, Myers, Underwood, Wolcott and Stanley.

Irrigation and Reclamation: Messrs. McNary (chairman), Jones (Washington), Phipps, Gooding, Cameron, Oddie, Shortridge, Sheppard, Walsh (Montana), Kendrick and Pittman.

Judiciary: Messrs. Nelson (chairman), Dillingham, Brandegee, Borah, Cummins, Colt, Sterling, Norris, Ernst, Shortridge, Culbertson, Overman, Reed, Ashurst, Shields and Walsh (Montana).

Library: Messrs. Brandegee (chairman), Wadsworth, Jr., Knox, McCumber, Williams, McKellar and Broussard.

Manufacturers: Messrs. La Follette (chairman), Kenyon, Fernald, McNary, McKinley, Nicholson, Weller, Smith, Pomerene, Jones (New Mexico) and Reed.

Military Affairs: Messrs. Wadsworth (chairman), Warren, Sutherland, New, Frelinghuysen, Lenroot, Spencer, Capper, Cameron, Bursum, Hitchcock, Fletcher, Myers, Sheppard, McKellar and Robinson.

Mines and Mining: Messrs. Poindexter (chairman), Sutherland, Newberry, Oddie, Nicholson, Norbeck, Walsh (Montana), Ashurst and Pittman.

Naval Affairs: Messrs. Page (chairman), Penrose, Lodge, Poindexter, Hale, Ball, Newberry, Keyes, France, Nicholson, Swanson, Pittman, Walsh (Montana), Gerry, Trammell and King.

Patents: Messrs. Johnson (chairman), Norris, Brandegee, Ernst, Smith, Stanley and Broussard.

Pensions: Messrs. McCumber (chairman), Smoot, Elkins, Townsend, Colt, Weller, Bursum, Walsh (Montana), King, Walsh (Massachusetts) and Gerry.

Post Offices and Post Roads: Messrs. Townsend (chairman), Sterling, France, Moses, Edge, Elkins, Phipps, Herrald, Oddie, Stanley, McKellar, Walsh (Massachusetts), Dial, Heflin, Watson (Georgia) and Broussard.

Printing: Messrs. Moses (chairman), Capper, Nelson, Townsend, Fletcher, Ransdell and Robinson.

Privileges and Elections: Messrs. Dillingham (chairman), Spencer, Wadsworth, Jr., Watson, Edge, Ernst, Shortridge, Bursum, Pomerene, Reed, Walsh (Montana), King and Walcott.

Public Buildings and Grounds: Messrs. Fernald (chairman), Warren, Frelinghuysen, France, Lenroot, Keyes, McKinley, Harreld, Reed, Ashurst, Culbertson, Trammell and Swanson.

Public Lands and Surveys: Messrs. Smoot (chairman), Norris, Poindexter, Lenroot, Ladd, Stanfield, Norbeck, Bursum, Myers, Pittman, Jones (New Mexico), Kendrick and Walsh (Montana).

Revision of the Laws: Messrs. Ernst (chairman) and Kellogg.

Rules: Messrs. Knox (chairman), Nelson, Curtis, Hale, Moses, McCormick, Watson, Overman, Owen, Underwood, Harrison and Robinson.

Territories and Insular Possessions: Messrs. New (chairman), McLean, Cummings, Knox, Johnson, McCormick, Willis, Ladd, Pittman, Owen, Robinson, Harris and Broussard.

ESCH AND WHITE CONFIRMED

THE SENATE on April 19 confirmed the appointment of John J. Esch, formerly congressman from Wisconsin, as a member of the Interstate Commerce Commission, and of Ex-governor Frank White of North Dakota as treasurer of the United States.

RELIEF LEGISLATION TO BE PUSHED BY HOUSE MINING COMMITTEE

JOPLIN SHOWS NEED OF TARIFF

The need of protective tariff for American minerals, as seen in Joplin, Missouri, is well illustrated by a story told around the capital by W. S. Wade, a business man of Springfield, Missouri. Mr. Wade said he was standing on a prominent corner in Joplin in conversation with a citizen of that city, when the deserted aspect of one of the main streets was commented upon. The Joplin citizen very promptly said to him, "You can shoot a splatter-gun up the streets of Joplin at any time, day or night, and never hit a soul."

THE HOUSE COMMITTEE on Mines and Mining, of which Congressman Marion E. Rhodes of Missouri is chairman, is planning several legislative enactments for relief of the industry. Chairman Rhodes recently stated to THE MINING CONGRESS JOURNAL that the mining industry was in a worse condition than it has been for fifty years.

"In my district," Mr. Rhodes said, "which is the leading producer of lead, barytes, and cobalt in the United States, practically every mine is closed today or wages have been cut from 20 to 30 percent, and people are out of employment by the thousands. This condition prevails not only in Missouri but largely throughout the United States in every mining section. It will be the policy of this committee to do whatever it can to help the mining interests."

One measure of permanent relief which this committee proposes to secure will be the passage of a law changing the time of doing annual assessment work from December 31 to July 31, or, in other words, making the year in which the work is done correspond with the fiscal year instead of the calendar year as now. There is a widespread demand for this law from the mining sections.

This committee also proposes that Congress acquire the title to the ground on which the Government Fuel Yards in Washington are located, and make it a permanent agency, perhaps enlarging upon the powers of the Bureau of Mines in this respect. The Bureau is authorized under the existing law to purchase coal for government departments in Washington. This committee proposes that the Bureau be made the agency for purchasing all the fuel, whether coal, oil, or otherwise, for all the various government agencies in the United States.

The fuel yards are reported to have saved the government approximately \$200,000 during the last two years. If the same percentage of economy can be effected on all government fuel purchases in the United States, the saving brought about thereby will amount to a very large sum.

The bill with reference to the fuel yards has already been introduced by Representative Rhodes. It provides, however, that any branch of the federal service may make fuel purchases direct upon the approval of the director of the bureau. The bill authorizes the bureau to investigate government fuel burning equipment and methods of handling, storing and using fuel, and to make recommendations calculated to effect fuel economy. It likewise authorizes the bureau to contract for fuel in advance of the availability of the appropriations. The various government departments are to pay the bureau not exceeding 5 cents per ton upon coal purchases and 1 mill per barrel upon fuel oil purchases for analyses or tests.

"This committee," Mr. Rhodes said, "will consider

some permanent legislation of a general character for the relief of war minerals producers. During the war, the demand was widespread for production of certain minerals, and the cessation of hostilities found many patriotic producers in a position to sustain great losses. This committee believes that Congress ought to give the right of appeal to all claimants whose cases have been determined by the war boards. There is a demand from Alabama to Oregon, and in fact from every state that has produced any of the forty minerals specified in the War Minerals Act. Whatever this committee can do to assist in relieving existing conditions, it will certainly do."

TARIFF LEGISLATION MAY REQUIRE SEVERAL MONTHS

GENERAL TARIFF REVISION, drafting of laws for which are now in progress, will reach the stage of actual consideration of specific bills during this month, probably between May 15 and June 1. Legislation will be based on the information gathered at hearings and executive sessions which began January 4, in all of which the American Mining Congress participated. It is expected that the revised tariff will become a law by October.

The Ways and Means Committee is continuing its executive sessions in consideration of the framing of the actual schedules. It is presumed that there will be no further hearings before the Ways and Means Committee but that the Bill will be reported out by the Committee based on the data and evidence already submitted.

The question of small percentages of mineral substances contained in ores or like material imported in sufficient quantity to be assayable but not in recoverable quantity being subject to tariff duties has been raised. In discussion with the administrative officials of the customs office it is their assurance that material not contained in recoverable quantity will not be subject to duty and it is probable that, if necessary, a proviso to this effect will be inserted in the law.

REPEAL OF PITTMAN ACT OPPOSED

OPPOSITION to repeal of the Pittman Act authorizing purchase of silver by the government at \$1.00 per ounce is expressed by Baker, Small & Company, engineers and financiers of Boston in a letter to Representative Tague of Massachusetts, which has been referred to the House Committee on Mines and Mining. The company states that those advocating repeal of the act are uninformed as to its workings and as to the needs of the silver industry of the United States. They hold that the fundamental element in the business life of the country is the producer, especially the miner and farmer.

"The mining industry is undergoing a decided and unprecedented slump," says the petition, "and it is well that the government has recognized that the time has arrived when it could extend a helping hand to the miner without the miner putting a helping hand into the Treasury of the United States."

The company asks that, should the matter come up, due weight be given to the justice of the Pittman Act and to the justness of the miners' claim that the act be upheld. It is stated that silver mining presents the only bright spot in the dark clouds of depression and uncertainty now existing.

HOUSE COMMITTEES

ON THE OPENING DAY of Congress, the Republican majority elected its members of all standing committees, and the Democratic minority chose members of the Ways and Means and Rules committees. Following is the complete roster of the latter two, and the majority membership of other committees which will handle matters of interest to mining:

Ways and Means: Majority members—Joseph W. Fordney (chairman), Mich.; William R. Green, Iowa; Nicholas Longworth, Ohio; Willis C. Hawley, Oreg.; Allen T. Treadway, Mass.; Ira C. Copley, Ill.; Luther W. Mott, N. Y.; George M. Young, N. Dak.; James A. Frear, Wis.; John Q. Tilson, Conn.; Isaac Bacharach, N. J.; Lindley H. Hadley, Wash.; Charles B. Timberlake, Colo.; George M. Bowers, W. Va.; Henry W. Watson, Pa.; Alanson B. Houghton, N. Y.; Thomas A. Chandler, Okla. Minority members—Claude M. Kitchin, N. C.; John N. Garner, Tex.; James W. Collier, Miss.; William A. Oldfield, Ark.; Charles R. Crisp, Ga.; John Carew, N. Y.; W. P. Martin, La.; Peter Tague, Mass.

Appropriations: James W. Good (chairman), Iowa; Charles R. Davis, Minn.; Martin B. Madden, Ill.; Daniel R. Anthony, Jr., Kans.; William S. Vare, Pa.; Joseph G. Cannon, Ill.; C. Bascom Slomp, Va.; Sydney Anderson, Minn.; William R. Wood, Ind.; Louis C. Cramton, Mich.; Patrick H. Kelley, Mich.; Edward H. Wason, N. H.; Walter W. Magee, N. Y.; George Holden Tinkham, Mass.; Burton L. French, Idaho; John A. Elston, Calif.; Milton W. Shreve, Pa.; Charles F. Ogden, Ky.; William H. Stafford, Wis.; James W. Husted, N. Y.; Elijah C. Hutchinson, N. J.; Robert E. Evans, Nebr.; L. J. Dickinson, Iowa.

Banking and Currency: Louis T. McFadden (chairman), Pa.; Porter H. Dale, Vt.; Edward J. King, Ill.; Frank D. Scott, Mich.; Adolphus P. Nelson, Wis.; James G. Strong, Kans.; Leonard S. Echols, W. Va.; Edward S. Brooks, Pa.; Robert Luce, Mass.; Clarence Macgregor, N. Y.; James W. Dunbar, Ind.; Lester D. Volk, N. Y.; T. Frank Appleby, N. J.; Henry F. Lawrence, Mo.; E. Hart Fenn, Conn.

Coinage, Weights, and Measures: Albert H. Vestal (chairman), Ind.; John M. Rose, Pa.; Clifford Ireland, Ill.; Florian Lampert, Wis.; John Reber, Pa.; R. Clint Cole, Ohio; Michael J. Hogan, N. Y.; Frank H. Funk, Ill.; W. M. Morgan, Ohio; William H. Frankhauser, Mich.; Thomas J. Ryan, N. Y.; Randolph Perkins, N. J.; J. Kubio Kalaniana'ole, Hawaii.

Interstate and Foreign Commerce: Samuel E. Winslow (chairman), Mass.; James S. Parker, N. Y.; Burton E. Sweet, Iowa; Walter R. Stiness, R. I.; John G. Cooper, Ohio; Edward E. Denison, Ill.; Everett Sanders, Ind.; Schuyler Merritt, Conn.; J. Stanley Webster, Wash.; Evan J. Jones, Pa.; Carl E. Mapes, Mich.; William J. Graham, Ill.; Sherman E. Burroughs, N. H.; Walter H. Newton, Minn.; Homer Hoch, Kans.

Foreign Affairs: Stephen G. Porter (chairman), Pa.; John Jacob Rogers, Mass.; Henry W. Temple, Pa.; Ambrose Kennedy, R. I.; Edward E. Browne, Wis.; Merrill Moores, Ind.; William E. Mason, Ill.; Ernest R. Ackerman, N. J.; James T. Begg, Ohio; Henry Allen Cooper, Wis.; Theodore E. Burton, Ohio; Benjamin L. Fairchild, N. Y.; Hamilton Fish, Jr., N. Y.; Theodore W. Hukriede, Mo.; Walter F. Lineberger, Calif.

Post Office and Post Roads: Halvor Steenerson (chairman), Minn.; William W. Griest, Pa.; Calvin D. Paige, Mass.; Harry C. Woodyard, W. Va.; C. William Ramseyer, Iowa; Archie D. Sanders, N. Y.; Samuel A. Kendall, Pa.; Guy U. Hardy, Colo.; C. Ellis Moore, Ohio; M. Clyde Kelly, Pa.; John C. Ketcham, Mich.; Roscoe C. Patterson, Mo.; Archibald E. Olpp, N. J.; John J. Gorman, Ill.; Richard E. Bird, Kans.; Dan A. Sutherland, Alaska.

The Public Lands: Nicholas J. Sinnott (chairman), Oreg.; Addison T. Smith, Idaho; Hays B. White, Kans.; William N. Vaile, Colo.; Henry E. Barbour, Calif.; John S. Benham, Ind.; John W. Summers, Wash.; Don B. Colton, Utah; Nestor Montoya, N. Mex.; Olger B. Burtness, N. Dak.; W. M. Morgan, Ohio; Lon A. Scott, Tenn.; Washington J. McCormick, Mont.; Charles L. Faust, Mo.; Dan A. Sutherland, Alaska.

Indian Affairs: Homer P. Snyder (chairman), N. Y.; Philip P.

Campbell, Kans.; Royal C. Johnson, S. Dak.; Frederick W. Dallinger, Mass.; Albert W. Jefferis, Nebr.; R. Clint Cole, Ohio; John Reber, Pa.; Alice M. Robertson, Okla.; E. O. Leatherwood, Utah; Nestor Montoya, N. Mex.; L. M. Gensman, Okla.; Sidney C. Roach, Mo.; Washington J. McCormick, Montana; Olger B. Burtness, N. Dak.; Dan A. Sutherland, Alaska.

The Territories: Charles F. Curry (chairman), Calif.; Albert Johnson, Wash.; Cassius C. Dowell, Iowa; Louis T. McFadden, Pa.; Edward S. Brooks, Pa.; James G. Strong, Kans.; Joseph McLaughlin, Pa.; Allen F. Moore, Ill.; Charles L. Knight, Ohio; Albert B. Rosedale, N. Y.; George P. Codd, Mich.; J. Kubio Kalaniana'ole, Hawaii; Dan A. Sutherland, Alaska.

Insular Affairs: Horace M. Towner (chairman), Iowa; Charles; E. Fuller, Ill.; James P. Glynn, Conn.; John I. Nolan, Calif.; Frederick N. Zihlman, Md.; Harold Knutson, Minn.; Louis W. Fairfield, Ind.; John C. Kleczka, Wis.; Edgar R. Kiess, Pa.; Frank Murphy, Ohio; Edgar C. Ellis, Mo.; Herbert W. Taylor, N. J.; L. M. Gensman, Okla.; Carroll L. Beedy, Me.

Railways and Canals: Loren E. Wheeler (chairman), Ill.; John S. Benham, Ind.; Oscar E. Keller, Minn.; Nathan D. Perlman, N. Y.; Harris J. Bixler, Pa.; Warren I. Lee, N. Y.; Joseph D. Beck, Wis.; Elliott W. Sproul, Ill.; John C. Speaks, Ohio.

Mines and Mining: Marion E. Rhodes (chairman), Mo.; Leonard S. Echols, W. Va.; John M. Robison, Ky.; Edwin B. Brooks, Ill.; Oscar R. Lühring, Ind.; Charles R. Connell, Pa.; Samuel S. Arentz, Nev.; William Williamson, S. Dak.; Don B. Colton, Utah; Dan A. Sutherland, Alaska.

Education: Simeon D. Fess (chairman), Ohio; Horace M. Towner, Iowa; Frederick W. Dallinger, Mass.; Albert H. Vestal, Ind.; Edward J. King, Ill.; Daniel A. Reed, N. Y.; John M. Robison, Ky.; Adolphus P. Nelson, Wis.; Clarence D. Coughlin, Pa.; Samuel A. Shelton, Mo.

Labor: John I. Nolan (chairman), Calif.; Frederick N. Zihlman, Md.; Norman J. Gould, N. Y.; Oscar E. Bland, Ind.; William J. Burke, Pa.; William O. Atkeson, Mo.; Joseph D. Beck, Wis.; Ogden L. Mills, N. Y.; Charles L. Knight, Ohio.

Patents: Florian Lampert (chairman), Wis.; Albert H. Vestal, Ind.; William J. Burke, Pa.; Randolph Perkins, N. J.; Samuel A. Shelton, Mo.; Andrew N. Petersen, N. Y.; Joe Brown, Tenn.; Joseph H. Himes, Ohio; Carroll L. Beedy, Me.

Claims: George W. Edmonds (chairman), Pa.; Edward C. Little, Kans.; Clifford Ireland, Ill.; James P. Glynn, Conn.; John M. Rose, Pa.; Oscar E. Keller, Minn.; Edgar C. Ellis, Mo.; Charles L. Underhill, Mass.; Michael J. Hogan, N. Y.; William H. Frankhauser, Mich.; John C. Speaks, Ohio.

War Claims: Bertrand H. Snell (chairman), N. Y.; Benjamin K. Focht, Pa.; Stuart F. Reed, W. Va.; James G. Strong, Kans.; Daniel A. Reed, N. Y.; John C. Kleczka, Wis.; Lon A. Scott, Tenn.; Sidney C. Roach, Mo.; I. Clinton Kline, Pa.; Harry C. Gahn, Ohio.

Revision of the Laws: Edward C. Little (chairman), Kans.; Charles E. Fuller, Ill.; Isaac Siegel, N. Y.; William H. Kirkpatrick, Pa.; Adam M. Wyant, Pa.; Herbert W. Taylor, N. J.; Benjamin L. Rosenbloom, W. Va.; Roy G. Fitzgerald, Ohio.

Irrigation of Arid Lands: Moses P. Kinkaid (chairman), Nebr.; Nicholas J. Sinnott, Oreg.; Edward C. Little, Kans.; Addison T. Smith, Idaho; John W. Summers, Wash.; Henry E. Barbour, Calif.; E. O. Leatherwood, Utah; William Williamson, S. Dak.; Samuel S. Arentz, Nev.; Manuel Herrick, Okla.

Expenditures in the Interior Department: Aaron S. Kreider (chairman), Pa.; Henry E. Barbour, Calif.; William Williamson, S. Dak.; Don B. Colton, Utah; Alice M. Robertson, Okla.

Rules: Majority members—Philip P. Campbell (chairman), Kans.; Bertrand H. Snell, N. Y.; William A. Rodenberg, Ill.; Simeon D. Fess, Ohio; Aaron S. Kreider, Pa.; Porter H. Dale, Vt.; Royal C. Johnson, S. Dak.; Thomas D. Schall, Minn. Minority members—Edward W. Pou, N. C.; Finis J. Garrett, Tenn.; James A. Cantrill, Ky.; Dan Riordan, N. Y.

Industrial Arts and Expositions: Oscar E. Bland (chairman), Ind.; Louis W. Fairfield, Ind.; Clifford Ireland, Ill.; William J. Burke, Pa.; Joseph McLaughlin, Pa.; Thomas J. Ryan, N. Y.; Manuel Herrick, Okla.; John C. Speaks, Ohio; Michael J. Hogan, N. Y.; Robert S. Maloney, Mass.

Flood Control: William A. Rodenberg (chairman), Ill.; Charles F. Curry, Calif.; Thomas D. Schall, Minn.; Stuart F. Reed, W. Va.; Oscar R. Lohring, Ind.; Frank Murphy, Ohio; Edgar C. Ellis, Mo.; Roy G. Fitzgerald, Ohio; Andrew N. Petersen, N. Y.

MINORITY COMMITTEE ASSIGNMENTS

MEMBERS of House committees were selected by the minority late in April. as follows:

Agriculture: H. M. Jacoway, Arkansas; John W. Rainey, Illinois; James B. Aswell, Louisiana; David H. Kincheloe, Kentucky; Marvin Jones, Texas; Peter G. Ten Eyck, New York.

Alcoholic Liquor Traffic: William D. Upshaw, Georgia; John C. Box, Texas; B. G. Lowrey, Mississippi; Hampton P. Fulmer, South Carolina.

Appropriations: Joseph W. Byrns, Tennessee; Thomas U. Sisson, Mississippi; James P. Buchanan, Texas; James A. Gallivan, Massachusetts; James F. Byrnes, South Carolina; Gordon Lee, Georgia; Ben Johnson, Kentucky; Charles D. Carter, Oklahoma; Edward T. Taylor, Colorado; William B. Oliver, Alabama; Thomas W. Harrison, Virginia; Anthony J. Griffin, New York.

Banking and Currency: Otis Wingo, Arkansas; Henry B. Steagall, Alabama; Charles H. Brand, Georgia; William F. Stevenson, South Carolina; Eugene Black, Texas; T. Alan Goldsborough, Maryland.

Census: William W. Larsen, Georgia; Samuel M. Brinson, North Carolina; John R. Tyson, Alabama; Morgan G. Sanders, Texas; John J. McSwain, South Carolina; John E. Rankin, Mississippi.

Claims: Henry B. Steagall, Alabama; James P. Woods, Virginia; John C. Box, Texas; W. Turner Logan, South Carolina; Alfred L. Bulwinkle, North Carolina.

Coinage, Weights, and Measures: Samuel M. Brinson, North Carolina; Clay Stone Briggs, Texas; Lilius B. Rainey, Alabama; Patrick H. Drewry, Virginia; Ladislav Lazaro, Louisiana; B. G. Lowrey, Mississippi.

Disposition of Useless Executive Papers: Arthur B. Rouse, Kentucky.

District of Columbia: James P. Woods, Virginia; Christopher D. Sullivan, New York; Thomas L. Blanton, Texas; Ralph Gilbert, Kentucky; William C. Hammer, North Carolina; Charles F. X. O'Brien, New Jersey; Stanley H. Kunz, Illinois.

Education: William B. Bankhead, Alabama; Charles H. Brand, Georgia; Samuel M. Brinson, North Carolina; B. G. Lowrey, Mississippi.

Election of President, Vice President, and Representatives in Congress: William W. Rucker, Missouri; Clay Stone Briggs, Texas; Hampton P. Fulmer, South Carolina; Alfred L. Bulwinkle, North Carolina; T. Alan Goldsborough, Maryland.

Elections No. 1: C. B. Hudspeth, Texas; William B. Bowling, Alabama; Ralph Gilbert, Kentucky.

Elections No. 2: Frank Clark, Florida; Hallett S. Ward, North Carolina; Morgan G. Sanders, Texas.

Elections No. 3: Zebulon V. Weaver, North Carolina; John C. Box, Texas; W. Turner Logan, South Carolina.

Enrolled Bills: Ladislav Lazaro, Louisiana; Thomas L. Blanton, Texas; John J. McSwain, South Carolina.

Expenditures in Department of Agriculture: Robert L. Doughton, North Carolina; Morgan G. Sanders, Texas.

Expenditures in Department of Commerce: Henry B. Steagall, Alabama; Joseph T. Deal, Virginia.

Expenditures in Department of Interior: Charles H. Brand, Georgia; Tilman B. Parks, Arkansas.

Expenditures in Department of Justice: Schuyler Otis Bland, Virginia; T. Alan Goldsborough, Maryland.

Expenditures in Department of Labor: Riley J. Wilson, Louisiana; Thomas L. Blanton, Texas.

Expenditures in Department of Navy: Rufus Hardy, Texas; Patrick H. Drewry, Virginia.

Expenditures in Post Office Department: Benjamin G. Humphreys, Mississippi; James P. Woods, Virginia.

Expenditures in State Department: William W. Rucker, Missouri; W. Turner Logan, South Carolina.

Expenditures in Treasury Department: R. Walton Moore, Virginia; William B. Bankhead, Alabama.

Expenditures in War Department: Edward B. Almon, Alabama; Ewin L. Davis, Tennessee.

Expenditures on Public Buildings: Zebulon V. Weaver, North Carolina; John R. Tyson, Alabama.

Flood Control: Benjamin G. Humphreys, Mississippi; Riley J. Wilson, Louisiana; Herbert J. Drane, Florida; Clay Stone Briggs, Texas; William J. Driver, Arkansas.

Foreign Affairs: Henry D. Flood, Virginia; J. Charles Linthicum, Maryland; Charles M. Stedman, North Carolina; Adolph J. Sabath, Illinois; Tom Connally, Texas; W. Bourke Cockran, New York.

Immigration and Naturalization: Adolph Sabath, Illinois; John E. Raker, California; Riley J. Wilson, Louisiana; John C. Box, Texas; Lilius B. Rainey, Alabama.

Indian Affairs: Carl Hayden, Arizona; William J. Sears, Florida; Zebulon V. Weaver, North Carolina; F. B. Swank, Oklahoma; Ross A. Collins, Mississippi; Hampton P. Fulmer, South Carolina; Morgan G. Sanders, Texas.

Industrial Arts and Expositions: Fritz G. Lanham, Texas; William C. Lankford, Georgia; Otis Wingo, Arkansas; Morgan G. Sanders, Texas; Joseph T. Deal, Virginia; F. B. Swank, Oklahoma.

Insular Affairs: Finis J. Garrett, Tennessee; Christopher D. Sullivan, New York; Benjamin G. Humphreys, Mississippi; R. Walton Moore, Virginia; William B. Bowling, Alabama; Tilman B. Parks, Arkansas; Hallett S. Ward, North Carolina.

Interstate and Foreign Commerce: Alben W. Barkley, Kentucky; Sam Rayburn, Texas; George Huddleston, Alabama; Clarence F. Lea, California; Paul B. Johnson, Mississippi; Harry B. Hawes, Missouri.

Invalid Pensions: William W. Rucker, Missouri; Thomas H. Cullen, New York; Ewin L. Davis, Tennessee; Charles F. X. O'Brien, New Jersey; Stanley H. Kunz, Illinois.

Irrigation of Arid Lands: Carl Hayden, Arizona; G. B. Hudspeth, Texas; John E. Raker, California; Homer L. Lyon, North Carolina.

Judiciary: Robert Y. Thomas, Jr., Kentucky; Hatton W. Sumners, Texas; Andrew J. Montague, Virginia; James W. Wise, Georgia; John N. Tillman, Arkansas; Fred H. Dominick, South Carolina.

Labor: Eugene Black, Texas; William D. Upshaw, Georgia; Ross A. Collins, Mississippi; George K. Favrot, Louisiana; Meyer London, New York.

Library: Frank Park, Georgia; Ralph Gilbert, Kentucky.

Merchant Marine and Fisheries: Rufus Hardy, Texas; Ladislav Lazaro, Louisiana; William B. Bankhead, Alabama; Ewin L. Davis, Tennessee; Thomas H. Cullen, New York; Herbert J. Drane, Florida; Schuyler Otis Bland, Virginia.

Military Affairs: William J. Fields, Kentucky; Percy E. Quin, Mississippi; Hubert F. Fisher, Tennessee; William C. Wright, Georgia; Philip H. Stoll, South Carolina; Daniel E. Garrett, Texas.

Mines and Mining: Otis Wingo, Arkansas; Lilius B. Rainey, Alabama; George K. Favrot, Louisiana; F. B. Swank, Oklahoma; Meyer London, New York.

Naval Affairs: Lemuel P. Padgett, Tennessee; Daniel J. Riordan, New York; Carl Vinson, Georgia; James V. McClintic, Oklahoma; Guy E. Campbell, Pennsylvania; James O'Connor, Louisiana.

Patents: Ewin L. Davis, Tennessee; Schuyler Otis Bland, Virginia; Fritz G. Lanham, Texas; William B. Bowling, Alabama; William C. Hammer, North Carolina.

Pensions: William D. Upshaw, Georgia; William C. Hammer, North Carolina; John J. McSwain, South Carolina; John E. Rankin, Mississippi; Joseph T. Deal, Virginia.

Post Office and Post Roads: Thomas M. Bell, Georgia; Arthur B. Rouse, Kentucky; James M. Mead, New York; Lucian W. Parrish, Texas; John H. Smithwick, Florida; Rorer A. James, Virginia.

Printing: William F. Stevenson, South Carolina.

Public Buildings and Grounds: Frank Clark, Florida; James C. Cantrell, Kentucky; Frank Park, Georgia; William W. Rucker, Missouri; Fritz G. Lanham, Texas; George K. Favrot, Louisiana; Homer L. Lyon, North Carolina.

Public Lands: John E. Raker, California; Carl Hayden, Arizona;

Robert L. Doughton, North Carolina; William W. Larsen, Georgia; Patrick H. Drewry, Virginia; William J. Driver, Arkansas; Ross A. Collins, Mississippi

Railways and Canals: Herbert J. Drane, Florida; Thomas H. Cullen, New York; William C. Lankford, Georgia; Hallett S. Ward, North Carolina.

Reform in the Civil Service: Eugene Black, Texas; Homer L. Lyon, North Carolina; Meyer London, New York.

Revision of the Laws: R. Walton Moore, Virginia; Rufus Hardy, Texas; Alfred L. Bulwinkle, North Carolina; John R. Tyson, Alabama; John N. Sandlin, Louisiana.

Rivers and Harbors: Samuel M. Taylor, Arkansas; H. Garland Dupre, Louisiana; James W. Overstreet, Georgia; Joseph J. Mansfield, Texas; John McDuffie, Alabama; John J. Kindred, New York.

Roads: Robert L. Doughton, North Carolina; Edward B. Almon, Alabama; William W. Larsen, Georgia; R. Walton Moore, Virginia; William J. Sears, Florida; C. B. Hudspeth, Texas; John N. Sandlin, Louisiana.

Territories: Zebulon V. Weaver, North Carolina; William C. Lankford, Georgia; Edward B. Almon, Alabama; Patrick H. Drewry, Virginia; John E. Rankin, Mississippi; William J. Driver, Arkansas.

War Claims: Frank Clark, Florida; John J. McSwain, South Carolina; John N. Sandlin, Louisiana; Charles F. X. O'Brien, New Jersey; B. G. Lowrey, Mississippi.

Woman Suffrage: John E. Raker, California; Frank Clark, Florida; Christopher D. Sullivan, New York; Thomas L. Blanton, Texas.

FEDERAL TRADE COMMISSION MAKES REPORT ON PRICES

THE FEDERAL TRADE COMMISSION on April 16 issued its report to the President on prices, which was briefly referred to by the President in his message to Congress, in which he recommended a price inquiry. The commission holds that the decline in prices of materials has been uneven but has resulted from a very general but likewise uneven decline in consumptive demand for manufactured products. It has affected raw material prices to a greater extent than those of manufactured or wholesale commodities. Retail prices to the consumer have least been affected. Manufacturers are still confronted by high transportation costs of raw materials and by a cost of labor which either has not decreased or has decreased less than those of raw materials. The commission holds that a decline in the cost of raw materials does not indicate a wholly proportionate decrease in the cost of manufacture.

"Fundamental in the cost of living is the housing shortage and the excessive price of fuel," says the commission. "High rents and high coal prices limit the general buying power for other commodities." The commission holds that the domestic market for many products has been unfavorably affected by centralized buying organizations representing foreign purchasers for export, which combinations have often been able to influence domestic market prices. It mentions, for example, British agencies which purchase American phosphate rock for use as artificial fertilizer. Among foreign groups acting in combinations in selling articles which American farmers buy from abroad are mentioned the Chilean Nitrate Producers' Syndicate, which has directly affected the prices of commodities, including commercial fertilizer.

The commission discusses activities of open-price associations, and says the public dissemination of data obtained by them and now used for the exclusive benefit of their members might make their operation of benefit to the producer and consumer, but that the tendency is to confine the information to members and bring about uniform prices and maintain them at an artificially high level by curtailing production or supply, although con-

certed agreement characteristic of combinations forbidden by the Anti-Trust Law is lacking.

The commission holds that there are too many distributing units between the producer and the consumer for the most economic handling of business. It says the manufacturer, jobber and retailer are more effectually able to resist price reduction than producers of raw products because they are more closely organized, have better credit facilities, and because of their location enjoy superior advantages in transportation and storage.

The commission argues in favor of government collection of information with reference to the adjustment of manufacturers', wholesalers' and retailers' prices in any industry and declares that the determination of production costs is an essential element in determining the propriety or average sales realization or of prices on particular sales. It also says that a government body authorized to ascertain costs should have authority to determine accounting methods by which costs are to be computed, whether in production or distribution, as present accounting systems tend to substitute average cost for actual costs.

OIL MAN BECOMES SECOND ASSISTANT POSTMASTER GENERAL

COL EDWARD H. SHAUGHNESSY, assistant director of the division of transportation of the American Petroleum Institute, was appointed Second Assistant Postmaster General on April 11. He succeeded Otto H. Praeger. Col. Shaughnessy served overseas as an officer in the Thirteenth Engineers, attained to the rank of colonel and earned the Distinguished Service Medal. He was in France two years. During the first year he was connected with the French army in railroad work at the front. Later he was general manager and acting deputy director general of transportation in advance of the American army. He became connected with the American Petroleum Institute in 1920.

SAFETY MEETING COMMITTEEMEN

COMMITTEES IN CHARGE of the International Mine Rescue and Safety First meeting at St. Louis on September 2 and 3 next have been appointed by the Bureau of Mines. W. K. Kavanaugh of the Southern Coke and Coal Company is chairman of the Program and Arrangements Committee. Others who will participate in reception and arrangements consist of Eugene McAuliffe, Dr. G. Pernoud, Francis E. Turin, Dr. Royal R. Sayers, Girard Warman, Dorsey J. Parker (Pittsburgh), Walter Nesbit (Springfield, O.), C. A. Herbert (Vincennes, Ind.), George Heppie (Moberly, Mo.), W. D. Ryan (Kansas City), W. S. Bedal, Walter M. Smith, Paul V. Dunn, Bert Barnett, Dr. R. Vitt, L. F. Lurnaghi, President 5th and 9th Districts, Illinois Coal Operators Association, Dr. J. J. Rutledge, Southwest District Bureau of Mines, Carl Smith of the St. Louis Safety Council, W. J. Jenkins, P. J. Stremmel, Clarence Howard, Charles F. Hatfield, P. H. Burns, American Red Cross of St. Louis.

POLISH MARKET FOR U. S. COPPER

INFORMATION has reached the Department of Commerce to the effect that Polish industries would be glad to have advice whereby they can receive shipments of American copper. Polish copper mines are inadequate, and many Polish industries dependent upon copper are idle because of inability to secure raw material. Arrangements have already been made for purchase through Great Britain of large quantities of ordinary and electrolytic copper, antimony, zinc, and mercury.

OFFICIAL STATE EXHIBITS WILL FEATURE MINING CONGRESS CONVENTION

SEVERAL WESTERN STATES have appointed committees to arrange exhibits for the National Exposition of Mines and Mining Equipment to be held in conjunction with the twenty-fourth annual convention of the American Mining Congress, in Chicago, October 17-22. Semi-official announcements presage numerous displays of an unusually high order and the attendance of delegations of record size.

John E. Miller, whose work as superintendent of exhibits at the Denver convention elicited such general approval, and who will fill the same position this year, arrived in Chicago late in April to stay on the job until the next convention. He expects to have charts and rules and regulations ready for use of prospective exhibitors within the next ten days.

While it is too early to announce even tentative details of the program, it can nevertheless be stated that at the various conferences there will be discussions of all of the great topics of direct interest to mining operators. Among the probable conference topics are taxation, production and cost, labor, transportation, standardization, gold production, commercial development of by-products, development of non-metalliciferous ores, national finances, mine management and handling of men, mineral tariffs, and government control of industry. The committee in charge will devote several weeks to consideration before making definite announcements.

Chairman Francis S. Peabody of the Illinois Committee on Arrangements called a meeting of his co-workers on April 7. The committee has been meeting frequently, and every member is taking a personal interest in all plans for furthering the convention and exposition.

Governor Carey of Wyoming has appointed State Senator A. D. Kelley, State Immigration Commissioner C. S. Hill, and State Geologist G. B. Morgan to arrange for a comprehensive exhibit of Wyoming mineral products, especially crude and refined oils. Wyoming's exhibit will be the first one to show comprehensively the products of the state's oil fields and refineries, and the committee has been instructed to make it the best which has been gathered together from that state since the World's Columbian Exposition, better known as the World's Fair, held in Chicago twenty-eight years ago.

After Mr. Burns had visited Spokane, the mining committee of the Spokane Chamber of Commerce decided unanimously that that state should be represented at the Chicago Convention and Exposition. J. C. Haas, W. J. Kirby, and John M. Semple were named as a committee to investigate and make preliminary plans.

At Spokane the suggestion was made that on account of business depression, 1921 would not be a good year in which to stage the biggest mine and mining equipment

exposition ever held. But after thorough discussion, the business men came to the conclusion that general conditions in the late summer and early fall would be decidedly better than they are now, and that it would be of decided advantage to the mining industry to have a very large exhibit and use it as a means of securing a share of the anticipated prosperity.

Seattle has decided to assist in financing an exhibit from Alaska as well as from the State of Washington. Many of the largest Alaska mine operators make their headquarters in Seattle. J. L. McPherson, manager of the Alaska Bureau of the Seattle Chamber of Commerce, sent a telegram to Governor Riggs of Alaska urging the participation of the territory in the exposition. Falcon Joslin, chairman of a special committee of Seattle business men appointed to secure the Alaska exhibit, did the same

thing. As a result, partly, of these telegrams, John A. Davis, chairman of the Alaska Chapter of the American Mining Congress, early last month, sent a letter to the Alaska legislature urging an appropriation for the Alaska exhibit at Chicago. The communication was referred to the Ways and Means Committee. Governor Riggs has personally requested the legislature to make this appropriation.

Governor Charles R. Mabey of Utah has appointed the following committee to arrange for a Utah exhibit at the Chicago Convention:

C. E. Allen, S. F. Ballif, Ernest Bamberger, J. A. Barelay, J. M. Bidwell, Ralph Bristol, Dr. J. E. Broadus, L. S. Cates, W. H. Child, R. K. Cobb, Fred Cowans, W. L. Ellerbeck,

Walter Fitch, O. J. Grimes, Moroni Heiner, J. B. Jensen, H. S. Joseph, Thomas Kearns, J. William Knight, G. W. Lambourne, J. A. MacIlwee, A. G. Mackenzie, D. MacVichie, Dr. Joseph F. Merrill, A. C. Milner, M. P. Morrissey, J. F. Nibley, R. H. Peale, Imer Pett, E. J. Radatz, Professor F. W. Reynolds, V. S. Rood, O. J. Salisbury, M. H. Sowles, F. A. Sweet, J. R. Walker, W. R. Wallace, J. B. Whitehill, G. M. Winkelman.

California has not only decided to send an exhibit and a big delegation to Chicago, but has entered the field early for the 1922 convention in case the meeting next year is held outside of Chicago. A committee of leading mining men to get together a state exhibit is now in process of formation. Mr. Burns attended the meeting of the California Metal and Mineral Producers Association, and received pledges of support. The association also sent a letter to Governor W. D. Stephens urging his approval of the movement to secure a state appropriation so that California can participate officially in the Chicago meeting. Fletcher Hamilton, state mineralogist of California, extended a personal invitation to the Governor to head the delegation of representative mining men who will go to Chicago.

CHAIRMAN CHANNON, OF EXPOSITION COMMITTEE, IS OPTIMISTIC

"I believe I am safe in saying that present indications are that never before in the history of the mining industry and the manufacture of equipment used in connection with mining, has there been such concerted good feeling and spirit of co-operation evidenced.

"We have already reserved space for the states of Minnesota, Montana, Washington, Oregon, California, Nevada, Utah, Colorado, Wyoming, Arizona and the territory of Alaska. A total of 14,000 feet has been reserved.

"In addition to this, the government of the United States will send here five big exhibits representing the Bureau of Mines, Geological Survey, Bureau of Good Roads, General Land Office and Public Health Service. The governments of Canada and Mexico will be represented by very large and comprehensive exhibits of the mineral products of those two nations.

"Other states are being organized, and we believe that the First National Mining Show will be an event of which we may all be proud. Also, it will recreate public confidence through a demonstration of self-belief in the mining industry and in the manufactures connected therewith."

Among those present at the San Francisco meeting besides Mr. Burns and Mr. Hamilton were: Edwin Higgins of the Bulkley-Wells National Exploration Company; William G. Devereaux of the Melones Mining Company; W. H. Levings, representing President Robert Newton Lynch of the San Francisco Chamber of Commerce; Robert L. Webb, executive secretary of the San Francisco Convention and Tourist League, and S. G. Bucklee of the San Francisco Boosters' Committee.

Both the Chamber of Commerce and the San Francisco Tourist and Convention League will back the movement to take the 1922 Convention and Exposition to San Francisco. It is believed that this movement, together with California's often demonstrated interest in the American Mining Congress, will cause at least 200 men from that State to go to Chicago.

The Chicago Coliseum has been leased for this mining exposition. A great electric fountain will play its myriads of colors upon the Alaskan exhibit which will occupy the center of the show, and, with the mining operators of Alaska backed by the Governor of that territory, thoroughly aroused to the importance of bringing Alaska into public notice at this time, it is expected that the Alaskan exhibit will be one of the most interesting of its kind ever made in the United States.

Grouped around the great electric fountain and the products of America's northernmost mining camps will appear the various states, including Minnesota, which will exploit her vast storehouses of iron and unlimited millions of tons of commercial peat; Montana, which although, until recently known most widely as being the greatest copper producing state on this continent, is now breaking into the public eye with unusual petroleum possibilities; Washington, with her silver and copper, her vast storehouses of magnesite which have released the United States from commercial bondage to Austria, with the newly found copper fields and vast coal resources; California, which first made possible the gold standard for the world through the hidden wealth of the gold in her hills, with hundreds of various minerals and non-metalliferous substances, with her petroleum, marble and onyx; Nevada, which in itself is a treasure-house, and which has already assembled one of the finest mineral exhibits ever made by any state in the union; Utah, whose hills are filled with almost unlimited and undeveloped mineral supplies, with coal and marble as a commercial background and with an incoming petroleum field which is now attracting the attention of the world; Colorado, noted for gold, silver, lead, zinc, coal, phosphate, potash, and innumerable substances which have brought, and will still bring, unlimited wealth to the people of that state; Wyoming, until recently practically unknown as a mineral producer, but which now occupies a leading place in the petroleum world, and whose hills are filled with iron, copper, asbestos and many other commercial substances; Oregon, with her great resources in gold, platinum, silver and many other wealth-producing commercialized deposits; and Arizona, underlaid with a wealth of copper, gold, asbestos and similar metals and minerals.

Surrounding the states will appear the various exhibits of the coal producing centers, some of the exhibits being made by states officially and some by organizations of coal producers. Mingled with these metals and coal exhibits it is expected that the commercialized by-products of the various substances shown will be demonstrated both as to method of manufacture and commercial use.

It will be shown that copper, zinc, lead and other basic substances reach into the daily life of the nation, and an effort will be made to demonstrate the economic importance of the protection, development and constant production from all phases of mines throughout the nation.

The cost of production, the method of handling, the hazards in operating and methods of distribution will be illustrated so far as is possible throughout the entire exposition.

There will be seven grand divisions of the exposition, including coal and metals, construction materials, fuel, standardized machinery and equipment, general machinery and accessories, safety and life saving devices, transportation, petroleum, oil shale and oil shale products, etc.

A number of governors have already accepted invitations to participate in the twenty-fourth annual convention of the American Mining Congress which will be held in connection with the exposition, and it is expected that the program will be one of the most notable discussions of vital national problems ever staged in the United States.

UTAH CHAPTER WANTS QUICK TARIFF ACTION

IMMEDIATE ACTION by Congress to prevent the dumping of foreign mineral products is necessary for protection of the American mining industry, in the opinion of members of the Utah Chapter of the American Mining Congress. Several members of the Utah Chapter have signified their intention of coming to Washington to confer with the Tariff Division of the American Mining Congress regarding plans of procedure.

A. G. Mackenzie, Secretary of the Utah Chapter, recently stated that such great havoc was being wrought to domestic metal prices by the dumping of foreign metals in the United States that it had become virtually impossible to operate any kind of a mine. "Only the pegging of the price of silver at \$1 per ounce by the provisions of the Pittman Act has made it possible for the silver mines of the West to continue operations," Mr. Mackenzie said. "Now the price of lead has dropped to such a level that the situation for even silver-lead mines is gloomy. With foreign lead being dumped in the United States, the price of the gray metal is held at 4 cents per pound and if this should continue it will be impossible for even the silver-lead properties to operate.

The closeness of the margin upon which silver mines are operating can be appreciated when it is understood that the net profit of the Kelly Mine of Randsburg, California, which produces a high grade gold-silver ore, is measured by the difference between the domestic price and the foreign price of silver. This is considered a bonanza mine, and yet it could not operate at present except for the Pittman Act.

It is considered practically impossible for properties which produce only a small amount of silver in comparison with their lead tonnage to operate so as to make a profit. Many mines in the Couer d' Alene district have already closed out, while others are staying open at a loss.

Utah operators, according to Mr. Mackenzie, have resorted to heroic measures to reduce the cost of production. They have cut wages and either curtailed or stopped development work, and are mining only the best ores, leaving the lower grade minerals in the ground in the hope that times will eventually become better. It is Mr. Mackenzie's opinion that tariff measures which will be enacted by the present extra session of Congress will give metal producers of the entire United States adequate protection. It is confidently believed, however, in some of the western states that the emergency in which the metal mining industry finds itself is so great that mining will suffer a still further and almost irreparable injury if enactment of tariff laws is postponed for six months or a year.

FOREIGN DIVISION OF AMERICAN MINING CONGRESS

THE STEADY INCREASE in the scope of its activities makes it important for the American Mining Congress to keep in close touch with the local as well as national problems, which confront mining operators in all parts of the country.

This requires a personal contact. To establish this contact a Field Secretary, E. C. Porter, has been appointed for the purpose of keeping the Washington headquarters of the American Mining Congress fully and accurately informed in regard to the point of view of the mine operator.

Mr. Porter has had considerable experience in work of this character. Since the completion of his education at



E. C. PORTER

Field Secretary of the American Mining Congress

Beloit College, Beloit, Wisconsin, and in the School of Business Administration at Harvard University, Mr. Porter was connected with the Merchants' Association of New York, was Manager of the New York Office of the Bureau of Foreign and Domestic Commerce during 1914 and 1915, and more recently was the Executive Secretary of the American-Russian Chamber of Commerce, an organization created in 1916 with the support of influential business interests for the purpose of developing closer business relations between the United States and Russia.

In addition to his work in the field Mr. Porter will also have charge of the preliminary development of the recently organized Division of Foreign Affairs of the American Mining Congress. The Division of Foreign Affairs will have as its primary purpose the securing of full information in regard to mineral resources in foreign countries and the actual production of minerals. Such information will be of value in furnishing a basis for establishing

proper safeguards for protecting American mining industries and safeguarding American interests.

Although primarily interested in the successful development of American mining enterprises, it is recognized that the incidental investment of American capital in mining enterprises abroad will be a helpful factor in bringing about a restoration of normal industrial conditions throughout the world. The American Mining Congress, through the work of the Division of Foreign Affairs, hopes to be able to render assistance to American interests in such developments. The successful development of the investment of American capital in mining enterprises abroad will be dependent upon the adoption by the National Government of a policy which will persistently support American interests in securing their legitimate rights.

HARD-PRESSED ARIZONA OPERATORS AID THEIR EMPLOYEES

DEEP CONSIDERATION has been given the copper situation by the members of the Arizona Chapter of the American Mining Congress. The leading operators are members of the chapter, and at practically every meeting this question is the foremost topic of discussion.

Serious industrial conditions arise with the closing down not only of the large porphyry mines but the smaller high-grade copper properties in Arizona. The closing down of the Inspiration Consolidated Copper Company, which employs between 1,400 and 1,500 men, will work great hardship in the Globe District. In addition to the number of men employed by the company direct, a large force of men who are employed at the International Smelting Company's plant will be affected through the closing down of a number of blast furnaces.

The closing of the Anaconda Copper Mining Company's mines will throw out of employment between 5,000 and 6,000 miners and in addition approximately 1,300 men employed in that company's ore reduction plant at Great Falls will be laid off. It is also anticipated that this company will reduce its force on the Butte-Anaconda-Pacific Railroad and in its coal mines and its lumbering plants. The action of the Anaconda, while far reaching in its effects upon its own producing force alone, will also be a serious handicap to those mills to which it sends its ore for treatment.

One bright ray of light percolating through the gloom is that the Copper Queen Branch of the Phelps Dodge Corporation at Douglas, which will close down its mine will retain a large number of its employees on the pay-rolls to continue work on development and construction. At least 1,000 men will be employed in this manner. The mines will not cease to operate. A schedule of underground development will be carried on and work will be continued on the new concentrator which the company is constructing above Don Luis, and operations on Sacramento Hill will be continued.

Grant H. Dowell, manager of the Copper Queen Branch of the Phelps Dodge Corporation, said that preference in the selection of the 1,000 men who will be kept at work would be given to married men. Financial assistance will be given to married employees who are affected by the closing of the smelter at Douglas. The announcement of the cessation of production of copper in a district where the mining of copper is about the only source of livelihood has met with a much more cheerful view than was anticipated. It is appreciated that the industry cannot continue producing copper when production costs are below selling prices and the view is being taken that with a suspension of production the chances of the industry being restored to normal are much better.

GOLD CALLS ON NATION FOR IMMEDIATE SUCCOR

THAT the country has lost forever the tonnage of some of its largest low-grade ore gold mines, and will suffer further unless the McFadden Bill or similar legislation is enacted at once, was the gist of addresses made at the International Mining Convention in Portland on April 8 by President W. J. Loring, of the American Mining Congress, and Fletcher Hamilton, state mineralogist of California.

"It is appalling to note that the production of gold in 1910 was \$96,269,000, in 1915 \$101,035,000, in 1920 \$49,509,000," Mr. Loring said. "Now, then, what is going to happen if this depletion of the gold production of the United States continues? Of course, at that rate, one might say that in another ten years there would be no gold production in the United States, but that would be wrong. There will be some gold production, no matter what the conditions are, and there is no doubt that, unless something is done to stimulate the gold production of the United States, the production will drop materially below the production of 1920.

"In my opinion it is quite an unnecessary reduction if we all stand together and support a measure that will keep gold mining on the map in this country. It does not matter whether it is the McFadden bill or a measure bearing some other name, so long as its purpose is the stimulation of gold production in our country.

"The great difficulty I find is that operations which paid handsomely prior to the war will not pay expenses at the present time and the large tonnages of low grade ore that were worked at a profit before the war have had to be abandoned, and in many cases these tonnages will never be recovered because the workings have caved and no one would have the heart to go back into these old mines and reopen them under any circumstances. Unless relief is given within a very short time more of these reserves of low grade ore will be lost forever."

Mr. Hamilton told the convention the McFadden bill was the means of relief. "The McFadden bill would in no way affect our monetary system," Mr. Hamilton said. "It would give the miner a fighting chance to continue operations on more or less of an equal footing with other industries, and it would assure the maintenance of the gold standard through the renewed output of the precious metal."

"The unanimous support of men in every walk of life should be given to the McFadden bill, or some similar measure."

Mr. Hamilton also emphasized that many mines have already gone out of business, saying, "Mines which have produced millions and which should produce millions have been shut down and allowed to cave in and fill with water, and mills and reduction plants worth a king's ransom are left to the mercy of the elements." He urged his hearers to give their strongest support to the McFadden bill, not only for its passage, but for its passage immediately.

ARIZONA CHAPTER WILL HOLD ITS NEXT MEETING IN JUNE

THE NEXT regular meeting of the Arizona Chapter of the American Mining Congress will be held in Bisbee on Monday, June 13. This date was set by resolution at the last meeting.

PORTLAND CEMENT PRODUCTION LEAVES ALL RECORDS BEHIND

THE year 1920 was the best in the history of the Portland Cement industry in the United States. The Geological Survey estimates the total output at 100,302,000 barrels, and shipments at 96,329,000 barrels valued at \$193,548,000. Shipments the year before amounted to 85,596,616 barrels valued at \$146,656,076. The increase in production in 1920 was 24 per cent, in shipments 13 per cent, and in value 31.9 per cent.

During 1920, 115 plants manufactured Portland cement. This was 4 more than the active plants in 1919. Alabama, Indiana, New York, and Oregon each furnished an additional plant.

Importations during the year amounted to 498,036 barrels of 380 pounds each, of a value of \$2.47 a barrel. Exports during the year amounted to 2,985,807 barrels of a value of \$10,045,369 or \$3.36 a barrel. Exports during 1920 were 522,118 barrels greater than those of the year before. March was the busiest month, when 369,640 barrels were exported, and July was the slack month, with a record of 156,713 barrels exported.

Production and shipment together with prices for the two years are shown in the following tables: (a)

State	Active plants		Quantity (barrels)		Percentage of increase 1920
	1919	1920	1919	1920	
California.....	8	8	4,642,679	6,995,000	51
Illinois.....	4	4	4,206,918	5,638,000	34
Indiana.....	5	6	7,262,454	10,700,000	47
Iowa.....	4	4	3,573,278	4,813,000	35
Kansas.....	7	7	2,927,270	4,301,000	47
Michigan.....	11	11	4,675,244	4,808,000	3
Missouri.....	5	5	5,216,347	6,039,000	16
New York.....	8	9	4,383,579	5,940,000	36
Ohio.....	5	5	1,637,418	1,790,000	9
Oklahoma.....	3	3	1,354,130	1,552,000	15
Pennsylvania.....	21	21	25,325,173	28,365,000	12
Texas.....	5	5	2,249,735	2,509,000	12
Utah.....	3	3	819,861	1,060,000	29
Washington.....	4	4	1,393,907	2,290,000	64
Other States (b).....	18	20	11,101,385	13,502,000	22
	111	115	80,769,378	100,302,000	24

State	Shipments			
	1919		1920	
	Quantity (barrels)	Value	Quantity (barrels)	Value
California.....	4,743,336	\$8,860,196	6,920,000	\$15,932,000
Illinois.....	4,873,831	7,901,689	5,205,000	9,439,000
Indiana.....	7,667,976	12,527,770	10,245,000	18,910,000
Iowa.....	4,569,110	7,798,347	4,437,000	5,376,000
Kansas.....	3,023,901	5,467,284	4,165,000	7,773,000
Michigan.....	4,990,308	8,468,196	4,426,000	10,785,000
Missouri.....	5,496,164	9,284,017	5,671,000	11,231,000
New York.....	4,441,250	7,700,406	6,049,000	11,071,000
Ohio.....	1,821,597	3,311,179	1,691,000	3,724,000
Oklahoma.....	1,350,601	2,578,571	1,527,000	3,280,000
Pennsylvania.....	26,250,077	43,126,528	27,669,000	52,349,000
Texas.....	2,318,747	4,226,222	2,639,000	5,797,000
Utah.....	935,305	1,906,816	1,021,000	2,290,000
Washington.....	1,402,616	2,868,590	1,810,000	4,462,000
Other States (b).....	11,711,797	20,650,256	12,854,000	26,929,000
	85,596,616	146,656,076	96,329,000	193,548,000

(a) Statistics for 1920 are estimates and subject to revision.

(b) Other States: Alabama, Colorado, Georgia, Kentucky, Maryland, Minnesota, Montana, Nebraska, New Jersey, Oregon, Tennessee, Virginia, West Virginia.

OIL AND COAL SURVEYS.—David White, of the Geological Survey, has been in New York conferring with oil geologists concerning the foreign petroleum situation. An agent of the survey is making examination of drillings for oil in New Mexico. An agent is investigating coal fields of Wise and Russell counties, Virginia.

MINES FURNISH OVER TWO-THIRDS OF ALL RAILROAD TONNAGE

SHIPMENTS BY ALL LINES of industry for the last quarter of 1920 are shown in the following table, which corresponds with the Interstate Commerce Commission's analysis except that manufactured mine products are here shown separately, and percentages are also given:

Carload tonnage of class 1 railroads, Quarter ended December 31, 1920

Commodities	Short Tons	Percentage Of All Revenue Freight Carried
Products of agriculture.....	65,757,019	11.5
Products of animals.....	11,332,755	2.
Products of forests.....	44,653,053	8.
Raw mine products.....	332,377,717	58.3
Manufactured mine products...	61,415,696	10.7
Other manufactured and miscellaneous products.....	54,259,638	9.5
Total.....	569,795,878	100.

Shipments of raw mine products are shown in the following table:

Carload tonnage of raw mine products, quarter ended December 31, 1920

Commodity	Short Tons
Anthracite coal.....	34,975,840
Bituminous coal.....	199,290,373
Coke.....	11,661,238
Iron ore.....	34,125,126
Other ores and concentrates.....	5,983,851
Base bullion and matte.....	516,158
Clay, gravel, sand and stone.....	36,772,786
Crude petroleum.....	3,200,151
Asphaltum.....	874,318
Salt.....	1,620,325
Other products of mines.....	3,357,551
Total.....	332,377,717

Shipments of manufactured mine products are shown in the following table:

Carlot tonnage, manufactured mine products, quarter ended December 31, 1920

Commodity	Short Tons
Refined petroleum and its products.....	15,054,713
Iron, pig and bloom.....	6,709,679
Rails and fastenings.....	1,824,377
Bar and sheet iron, structural iron and iron pipe...	14,959,407
Other metals, pig, bar and sheet.....	2,687,964
Castings, machinery and boilers.....	3,997,869
Cement.....	7,956,828
Brick and artificial stone.....	5,275,848
Lime and plaster.....	2,097,443
Sewer pipe and drain tile.....	871,568
Total.....	61,415,696

Even in the above segregation, full credit is not given the mines for all the revenue freight they provided. Only those articles which are manufactured entirely out of mine products are listed. Among commodities for which no credit is claimed are automobiles and trucks, agricultural implements, fertilizers and chemicals and explosives, some of which are fabricated more than 95 percent from mine products.

AMERICAN MINE PRODUCTS, raw and manufactured, provided 69 percent of all tonnage carried in carload lots by Class 1 railroads during the last quarter of 1920. These and other statistics showing the preponderating greatness of the mining industry are announced by the American Mining Congress, which bases its calculations entirely upon official government statistics.

Not only did the mines furnish the railroads more than twice as much tonnage as all other industries combined, but, what is of surpassing importance, they provided to the railroads the most economically transportable tonnage. For while in carload tonnage they furnished 69 percent of all revenue freight, yet they utilized only 53.5 percent of all cars actually used in carrying revenue tonnage in carload lots. The industry which furnishes more than two-thirds of all railroad tonnage uses slightly more than half of the car supply—an economy which every business man will readily appreciate.

Shipments of raw mine products amounted to 58.3 percent of all railroad car-lot tonnage and of manufactured mine products to 10.7 percent. Manufactured mine products alone were greater in tonnage than all other manufactured products combined and only four-fifths of one percent less than shipments of all agricultural products.

Excluding all shipments of bituminous coal, the mining industry still provided in its raw materials twice as much tonnage as agriculture, two and one-half times as much as non-mining manufactures and miscellaneous commodities, three times as much as forestry and approximately twelve times as much as the animal industry.

WORLD'S COAL PRODUCTION IN 1920

APPROXIMATELY 1,300,000,000 metric tons of coal were produced in the world in 1920, according to calculations of the United States Geological Survey. This was a great increase over production of 1919, but was 42,000,000 tons less than that of 1913, the last pre-war year. A metric ton is approximately 2240 pounds.

Taking production of 1913 as the normal basis, that of 1920 was 97 percent; that of 1919, 86 percent; that of 1918, 99 percent, and that of 1917, 100 percent.

The following table shows world production and the percentage of output produced by the United States during the last ten years:

*World's Production Of Coal, 1920
(Metric Tons)*

Year	Production in part estimated	Per cent produced by United States
1910	1,160,000,000	39.2
1911	1,189,000,000	37.9
1912	1,249,000,000	38.8
1913	1,342,000,000	38.5
1914	1,205,000,000	38.6
1915	1,196,000,000	40.4
1916	1,296,000,000	41.4
1917	1,345,000,000	44.0
1918	1,331,000,000	46.2
1919	1,158,000,000	42.9
1920	1,300,000,000	45.1

CAN LIGNITE SUPPLANT COAL IN NORTHWESTERN STATES?

THE EXTENT to which carbonized lignite may find a market in the Dakotas, Minnesota, and contiguous states is to be determined by an investigation by Dr. Erich H. Zimmerman, professor of commerce of the James Millikin University, Decatur, Illinois. Dr. Zimmerman has been detailed by the United States Bureau of Mines.

The Sixty-sixth Congress appropriated \$100,000 for investigating possibilities of increased utilization of northwestern lignites. W. W. Odell, fuel engineer of the Bureau of Mines, was recently sent to Montreal and Ottawa to secure an exchange of information with the Canadian government relative to the technical problems involved in the carbonization of lignite. The Bureau of Mines has become convinced that northwestern lignites can be converted into high-grade smokeless fuel, and that the process of conversion will yield considerable quantities of gas and oil as by-products. It now remains only to consider the economic questions involved, the principal one of which is whether carbonized lignite can compete with coals from the central Mississippi and Ohio Valleys which are now shipped into the northwest.

One important element in favor of the commercial utilization of lignite is that it is found in parts of the country which have no other solid fuel. National coal resources of all kinds aggregate 3,553,637,100,000 minable tons, of which nearly one-third is lignite. Of the lignite, approximately 964,424,000,000 tons lies in North and South Dakota and northwestern Montana, 23,000,000,000 tons in Texas, and 7,404,300,000 tons in Alaska.

Since there is no experimental plant for treating lignite by-products, it is probable that investigative work will be conducted at some of the Bureau of Mines general experiment stations. The moisture content makes lignite unsuitable as fuel in its natural state. Coal is shipped into the lignite country from great distances, and the results are high prices for both industrial and domestic fuel, the tying up of transportation facilities needed for other services, the suffering of a handicap in the industrial development of the northwest, and general economic loss. More than 2,000,000 tons of bituminous and 1,500,000 tons of anthracite is shipped annually a distance of 1,000 miles from Illinois, Indiana, West Virginia, Kentucky, and Pennsylvania into the states of North Dakota, South Dakota and western Minnesota. An average of 400 miles would be all that is required in shipping briquetted lignite.

Dr. Zimmerman is considered eminently well equipped for making these important investigations. He holds several degrees from American and European universities, is the author of numerous books upon foreign trade and shipping subjects, and has made a special study of the relation of coal exports to shipping. He expects to complete his report by July 1.

MARCH ANTHRACITE SHIPMENTS. — Mild weather during the month and the winter preceding and the hope of consumers that price declines were imminent caused shipments of anthracite during March to fall to 5,737,771 gross tons, as compared with 5,966,101 tons in February and 6,077,821 tons during March of 1920. Total shipments for the first three months of the calendar year were 69,366,731 tons, as compared with 69,815,034 during the parallel period of last year. The decrease of 448,303 tons is small, mild weather considered. Figures computed by the Anthracite Bureau of Information, Philadelphia.

CONVENTION OF THE NATIONAL COAL ASSOCIATION

ONE OF THE MOST IMPORTANT conventions in the history of the National Coal Association, representing the bituminous coal operators throughout the country, will be held on May 19, 20 and 21 at the Waldorf-Astoria, New York. Judging from present indications a large proportion of the 2300 members of the association will attend.

Although the program for the convention is not yet complete, enough has already been arranged to give a glimpse of the real interest it will hold for the industry. Aside from the business to be taken up, there will be addresses by men prominent in public life who will touch upon matters pertaining to coal and business in general.

Among the matters to be discussed will be the part played by trade associations in the work of after-war reconstruction. The relation of trade associations to the government in its efforts to restore business to "normalcy" will be taken up.

The business outlook of the nation will be gone into in addresses before the convention.

Transportation readjustment as one of the essentials in the immediate future development of business will be discussed. The dependency of the coal industry upon adequate railroad transportation the year around will form a part of this theme.

The convention will open at ten o'clock on Thursday, May 19, and there will be morning and afternoon sessions on that day and Friday, the convention ending with a morning session on Saturday. At the business sessions new officers will be elected and there will be reports covering the activities of the association for the last year.

CONVENTION OF AMERICAN WHOLESALE COAL ASSOCIATION

THE AMERICAN WHOLESALE Coal Association will hold its annual convention at Washington on June 7 and 8 at the Washington Hotel. The final program is being arranged. Considerable interest has been aroused among the wholesalers of the country, and it is believed that the attendance at the Washington meeting will be the largest on record.

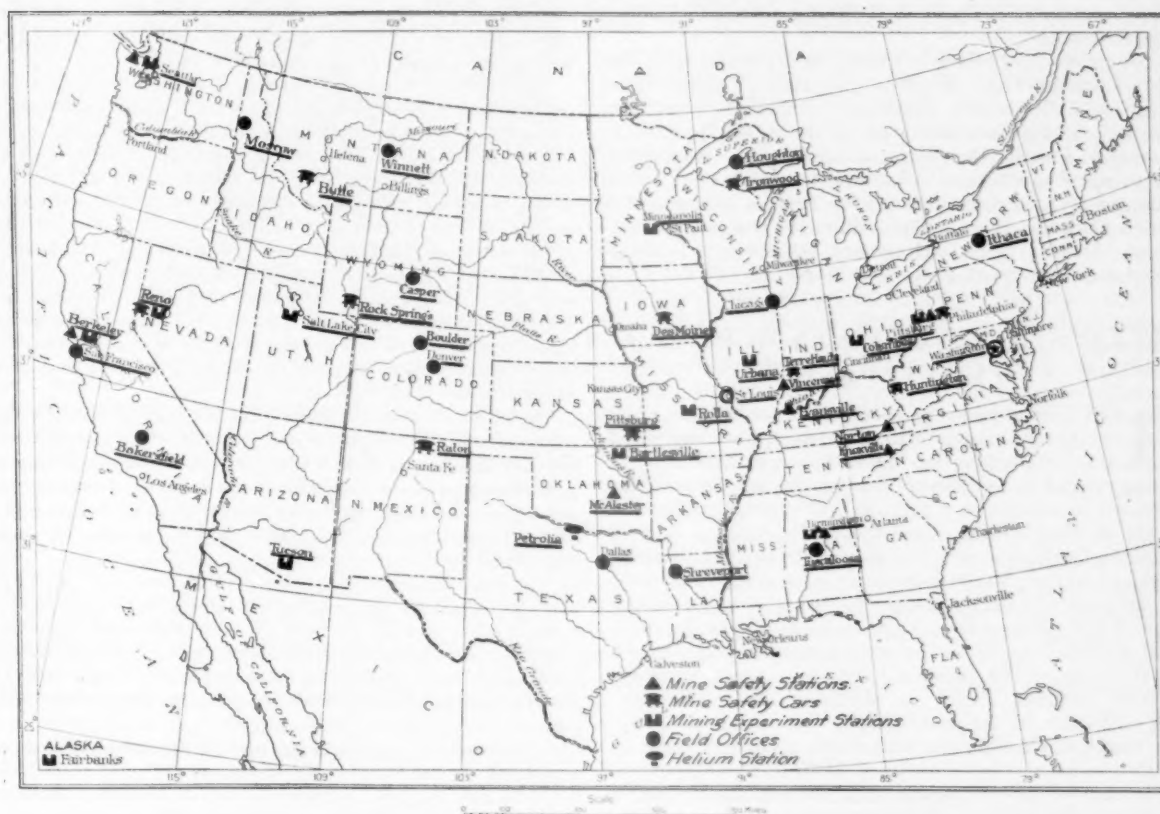
COAL ASSOCIATION OFFICERS RESIST EXTRADITION

SUIT WAS FILED on April 7 by J. D. A. Morrow, Vice-President of the National Coal Association, in the Supreme Court of the District of Columbia against John E. Laskey, U. S. District Attorney for the District of Columbia, and the Attorney General of the United States and various federal officers in Indiana, Illinois, Pennsylvania, and Delaware, for an order restraining them from bringing about his removal to Indiana to answer a charge of violation of the Sherman Law. Hearing on the petition was set for April 25.

The gist of the charge against the National Coal Association and against Mr. Morrow related to the restriction of production of coal. The answer is that the National Coal Association conducted its activities during the war with full cognizance of the government and for purely patriotic purposes. The additional allegation is made that on purely constitutional grounds, the Indiana Court has no authority to require Mr. Morrow to go to Indianapolis. It is also charged that some of the federal officials are deliberately attempting to destroy the bituminous coal industry.

Location of Bureau of Mines Field Stations

(Prepared for the MINING CONGRESS JOURNAL)



Bureau of Mines Experiment Stations

NAME	LOCATION	WORK
Petroleum.....	Bartlesville, Okla....	Oil.
Pacific.....	Berkeley, Cal.....	Chemicals; magnesite; miscellaneous.
Ceramic.....	Columbus, Ohio.....	Ceramics.
Alaska.....	Fairbanks, Alaska....	Development of resources of Alaska.
North Central....	Minneapolis, Minn..	Utilization of low-grade iron ores.
Pittsburgh.....	Pittsburgh, Pa.....	Mining, largely coal; electro-metallurgy.
Rare and Precious Metals.	Reno, Nev.....	Rare and precious metals.
Northwest.....	Seattle, Wash.....	Ceramics; coal washing; electro-metallurgy.
Inter-Mountain...	Salt Lake City, Utah.	Low-grade lead and zinc ores.
Southwest.....	Tucson, Ariz.....	Low - grade copper ores.
Central District...	Urbana, Ill.....	Coal.
Southern.....	Birmingham, Ala....	Iron and steel; coke; coal; by-products, non-metallics.
Mississippi Valley.	St. Louis, Mo.....	Lead and zinc.

THE ABOVE DRAWING, prepared for THE MINING CONGRESS JOURNAL, shows the location of all stations and field offices of the United States Bureau of Mines, about forty in number. It will be noted that there are five classes of field offices, and that a different symbol is used for each.

In its organization of mine rescue and first aid work, the Bureau of Mines has divided the United States into nine districts. District "A" consists of Pennsylvania, New York, New Jersey, and the New England states, headquarters of the mine rescue car and mine safety station being at Pittsburgh, Pa. District "B", consisting of Ohio, Kentucky, Virginia, West Virginia, Maryland and Delaware, has its mine safety station at Norton, Va., and mine safety car at Huntington, West Virginia. District "C" consists of Louisiana, Tennessee, North Carolina, South Carolina, Alabama, Georgia and Florida. Mine safety stations in this district are located at Birmingham, Ala., and Knoxville, Tenn.

District "D" consists of Indiana, Illinois, Iowa and a portion of Michigan. Mine safety stations are located at Vincennes and Evansville, Ind., and mine safety cars at Des Moines, Iowa, and Terre Haute, Ind. District "E", comprising North and South Dakota, Minnesota, Wisconsin and a portion of Michigan, is served by a mine safety car stationed at Ironwood, Mich. District "F", consisting of Nebraska, Kansas, Missouri, Arkansas, Oklahoma and Texas has a mine safety station at McAlester, Okla., and a mine safety car at Pittsburg, Kansas.

For District "G", consisting of Colorado, New Mexico and Arizona, there is a mine safety car located at Raton

New Mexico. District "H", consisting of Montana, Washington, Idaho, Wyoming and Utah, has mine safety cars at Butte, Montana, and Rock Springs, Wyoming, and a mine safety station at Seattle, Wash. District "I", composed of Oregon, California and Nevada, has a mine safety station at Berkeley, Cal., and a mine safety car at Reno, Nevada.

Among the field offices of the Bureau of Mines are those at Bakersfield, Cal.; Winnett, Montana; Casper, Wyoming; and Shreveport, Louisiana, which are devoted to supervision of production of oil on the public domain, as provided for under the recent oil-leasing act. Field headquarters for supervision of mineral leases are at Denver, Colorado. Other field offices of the Bureau are located at Ithaca, New York; Chicago, Illinois; Tuscaloosa, Alabama; Dallas, Texas; Houghton, Michigan; Boulder, Colorado; Moscow, Idaho; and San Francisco.

SUCCESS OF MINE SAFETY WORK DUE TO CO-OPERATION

RESULTS of mine rescue and first aid training given by the Bureau of Mines, as exemplified especially in the co-operation between mine owners, mine managers and mine workers during the last decade, are discussed in an interview prepared for general publication by Dr. H. Foster Bain, director of the bureau.

During the decade that ended June 30, 1920, the Bureau of Mines trained 50,971 persons in mine-rescue and first-aid methods. In Pennsylvania, the banner coal-producing state, 9,111 persons have been trained. Colorado, with 2,921 persons trained, is the second state in this respect. In Montana, 2,740 persons have been given training; in West Virginia, 2,713; in Michigan, 2,620; in Kentucky, 2,447; in Arizona, 2,147; in Alabama, 2,097. The state of Washington, with 1,784 persons trained in relation to an average number of 6,035 miners employed, has a rate of 295.56 persons trained per one thousand employed, the best record of any mining state.

The Bureau of Mines has at present ten specially equipped Pullman cars engaged in transporting its training crews from mine to mine. There are ten mine-rescue stations established: at Pittsburgh, Pa.; Wilkes-Barre, Pa.; Vincennes, Ind.; Norton, Va.; Knoxville, Tenn.; Evansville, Ind.; Birmingham, Ala.; Berkeley, Cal.; McAlester, Okla., and Seattle, Wash. In addition to training miners in first-aid and rescue methods, the crews of the cars and stations give first-aid training to wives and children of miners, so that the bureau's efforts for health and safety go directly into the home. The statistics show a steady reduction in the accident rate as the training work progresses.

"Ten years ago," said Dr. Bain, "there was no general, country-wide service for systematic training of miners in matters relating to safety. A beginning only had been made at a few scattered points. Under the old conditions each man was left largely to look out for himself in meeting the hazards of his day's work, and the foreman, shift-bosses and superintendents chiefly relied upon improvisation when major accidents occurred. So long as the mines were small and the workers highly intelligent and well trained in routine mining methods, and when, too, the pressure for output had not yet speeded up industry to the extent it has since those days, there was something to be said for this *laissez faire* attitude. When, however, the rapid expansion of industry led to the introduction of new and little trained labor and to units of production of greatly increased size, the natural dangers of mining were greatly intensified. An accident in a small mine affects but a few; the same accident in a large mine, unless proper precautions have been taken, may cost the lives of many. The public does not generally recognize that the greatly increased output of the mines, of coal mines in particular,

of recent years, has been obtained from substantially the same number of miners as ten years ago, but with a personnel not nearly so well trained in mining. It is inevitable under such conditions that more care must be devoted to avoiding accidents and much more elaborate preparations made for meeting them. In the years immediately preceding the establishment of the Bureau of Mines, this speeding up of industry, change in the character of mine labor, and increasing hazard had all begun to be felt.

"Immediately prior to the organization of the Bureau of Mines, public attention had been drawn to a series of disastrous coal-mine explosions, to the increasing frequency of these disasters, and to the terrible loss of human life resulting therefrom. One of the first problems, therefore, confronting the bureau was clearly that of finding methods of reducing the number of such disasters and lessening the severity of those that continued to occur. Toward this object were immediately directed the energies not only of the Bureau of Mines but also those of state mine inspectors, mine operators and various other agencies, all of whom were urged to co-operate in this great humanitarian work. The results of this work naturally cannot be measured by figures only. Work for increasing the health, safety, comfort, and happiness of human beings may not be gauged with mathematical precision.

"No service rendered by the Bureau of Mines affects more directly and vitally the well-being of the miners in this country and the comfort and happiness of their families than the training the bureau gives them in mine rescue and first aid methods. In this great, country-wide work the bureau has been fortunate in obtaining the aid and co-operation alike of the miner, the mine operator, the state mine official, and the general public.

"The miner has shown his knowledge of the need of the work for safety by voluntarily applying for the training given through the bureau's safety stations and cars; by using permissible explosives for mining coal in gaseous and dusty mines instead of more dangerous black powder and dynamite; by being careful at all times, and by attending and participating in first aid and safety meetings and contests.

"The operator is introducing safer mining methods, and is recognizing the need of adequate ventilation and of effective control of the dust menace in coal mines, as well as the need of constant examination of mine air for the presence of explosive gas and harmful dust. In addition, the operator has stimulated and maintained interest in first aid and rescue work by encouraging the holding of meets and rallies, by posting safety bulletins at mines, and by adopting the suggestions of his employees and the facilities afforded by the various safety organizations for the elimination of dangerous conditions or practices. How wide this movement for greater safety has become is shown by the volume of the business now done by concerns dealing in mine safety appliances and supplies.

"Public interest in mine safety is shown by the adoption of new mining codes or the revision of old ones by state legislatures, by provision for state mine inspection systems, and by the enactment of laws providing for the relief of the victims of accidents or their dependents. These compensation laws generally recognize the value of first aid and rescue training by making the charges for compensation insurance lower to those mining companies that provide for the maintenance of such training.

"Of outstanding significance is the fact that all these efforts for greater safety have involved active co-operation between the miner and the operator. The miners have their organizations, the operators their associations, both formed for the furtherance of definite economic ends; but the task of making conditions safer and of lessening death and disability from accident at a particular mine necessarily involves the earnest co-operation of the miner, the mine management, and the mine owner."

HERBERT HOOVER resigned as President of the Federated American Engineers Society on April 16. He gave as his reason the fact that the council was engaged in furthering national activities involving legislation, and that he could not consistently direct these activities and serve at the same time as a member of the Cabinet.

WHAT THE ALASKA MINING EXPERIMENT STATION IS DOING

AN INTERESTING REPORT on the work of the Alaska station of the United States Bureau of Mines has been prepared by John A. Davis, superintendent. The station at the present time is conducting investigations mainly along two lines, the recovery of gold from black sands and the study of milling methods. These experiments have caused a great deal of interest among Alaska placer miners who have been enabled thereby to effect a saving of gold in their mining operations.

Ordinarily the Bureau of Mines does no ore-testing work for the benefit of private companies or individuals. However, such work is done by the bureau where there are no private agencies sufficiently equipped and where the work required is of sufficient public interest to justify governmental expenditures. This condition prevails in Alaska. While the station has not developed any process new to the metallurgical industry, it has, by the application of methods used elsewhere, devised means of treating ore which cannot be treated profitably by methods ordinarily employed in the district. Mr. Davis makes the statement that while the results in some investigations by the Alaska station have been negative from a metallurgical point of view on account of the low grade of ore and high cost of machinery, fuel, and labor, they have been of positive benefit in preventing the erection of concentrating plants which would have been unsuccessful.

The station is also making qualitative determinations and assays for prospectors and mining men. This part of the work has been especially favorably commented upon. The station is also making fuel investigations, and in this connection is looking into the feasibility of using lignite in a central plant for the generation of electricity to be transmitted to the metal mining districts.

ALASKA COAL REGULATIONS ISSUED BY GENERAL LAND OFFICE

REGULATIONS governing coal prospecting in Alaska have been issued by the General Land Office. Issuance was made necessary by the act of March 4, 1921, amending the act of October 20, 1914.

Prospecting permits may cover 2,560 acres for four years, and will be issued where exploratory work is necessary to determine the existence or workability of coal deposits in any unclaimed or undeveloped area. Permits can be issued only to citizens of the United States, associations of citizens, or to corporations a majority of whose stock is owned and held by citizens.

PRESIDENT'S ALASKA VISIT

PRESIDENT HARDING considers that Alaska has infinite possibilities and is deeply interested in the development of the territory. He contemplates a visit to Alaska between the adjournment of the extra session and the convening of the regular session next December, and will make the trip in company with Secretary of Interior Fall. The President thinks it is necessary for government officials to be personally familiar with the territory and its conditions in order to intelligently take administrative steps or recommend legislative action for its benefit. It has recently been learned that the President planned a trip to Alaska last year, but had to abandon the idea when he was nominated for the presidency.

MICA IN 1919

MICA PRODUCED and sold in the United States in 1919 amounted to 4,031 short tons, valued at \$541,651. Of this quantity 1,545,709 pounds valued at \$483,567 was sheet mica, the remainder being scrap. There was a decrease of 6 percent in quantity of sheet mica and of 34 percent in value as compared with 1918, but an increase of 42 percent in the quantity of scrap mica as compared with 1918.

Ninety percent of sheet mica consumed in the United States is used for electric insulation. Films of the substance are used in condensers for magnetos and wireless apparatus, and sheets, tubes, and washers of mica are used in dynamos and other electric appliances. Mica is also used as a glazing material in stove doors, furnace peep-holes, divers' helmets, and in other places where transparency under heat is required. Ground mica is used to give luster and brightness to wall-paper, as a lubricant, an insulator, and a filler in paints and tiles and concrete to imitate the texture of granite, as imitation snow on Christmas trees, to prevent hot-boxes on railroad cars, as a preservative and filler of rubber goods, in printing calico, in annealing steel, in making certain roofing materials, and as an absorbent of nitro-glycerine in the manufacture of mica powder, as well as in many other ways.

Mica produced and sold in 1919 came from the following states, arranged in the order of the quantity of sheet mica sold: North Carolina, New Hampshire, Virginia, Georgia, West Virginia, and Alabama. Small quantities of scrap were reported sold from South Dakota and Colorado, but no sheet mica.

Production during the last reported decade was as follows:

Mica Produced and Sold in the United States, 1910-1919.

Year.	Sheet mica.		Scrap mica.		Total quantity (short tons).	Total value.
	Quantity (pounds).	Value.	Quantity (short tons).	Value.		
1910...	2,476,190	\$283,832	4,065	\$53,265	5,303	\$337,097
1911...	1,887,201	310,254	3,512	45,550	4,456	355,804
1912...	845,483	282,823	3,226	49,073	3,649	331,896
1913...	1,700,677	353,517	5,322	82,543	6,172	436,060
1914...	556,933	278,540	3,730	51,416	4,008	329,956
1915...	553,821	378,259	3,959	50,510	4,236	428,769
1916...	865,863	524,485	4,433	69,906	4,866	594,391
1917...	1,276,533	753,874	3,429	52,908	4,067	806,782
1918...	1,644,200	731,810	2,292	33,130	3,114	764,940
1919...	1,545,709	483,567	3,258	58,084	4,031	541,651

GYPSUM DEPOSITS

GYPSUM DEPOSITS in the United States are described in a bulletin just issued by the Geological Survey. Gypsum is the rock used for making plaster of paris and hard wall plaster, and is also an ingredient of Portland cement. It likewise is used as a fertilizer. The bulletin shows that gypsum is distributed from New York to California and from Michigan to Texas. The deposits in some states are so small that they may be worked out in a few years; those in other states, like Wyoming and New Mexico, consist of thick beds that crop out at the surface for hundreds of miles and that are seemingly inexhaustible.



INCREASED COST OF RAILROAD FUEL NEARLY 300 MILLION DOLLARS

By C. H. FARRELL

IN COMPLIANCE with a Senate resolution the Interstate Commerce Commission has recently made public a somewhat detailed report containing many statistics and showing the increased cost of railroad fuel during 1920 compared with the year 1919. The total increase in the cost to the railroads, delivered, of all kinds of fuel, including bituminous and anthracite coal, coke, fuel, oil, hard wood and soft wood, was \$296,085,835, or almost as much as the carriers claim they will be able to save through the abrogation of the National Agreements with the brotherhoods. It must be borne in mind, however, that while this increase is quite large, nevertheless the amount of fuel used also increased quite substantially, there being purchased 31,436,127 net tons of bituminous coal more than in the previous year. The increase in anthracite coal was 983,466 net tons; in fuel oil, 12,629,377 barrels; in coke, 18,342 net tons; in hard wood, 21,860 cords; in soft wood, 18,961 cords; and in other fuel, 13,841 net tons.

The average increase per net ton in bituminous coal was 98 cents, in anthracite coal 73 cents, in fuel oil 33 cents a barrel, in coke \$3.94 per net ton, in hard wood 46 cents per cord, in soft wood 63 cents per cord, and on other fuel 76 cents per net ton.

The commission's report contains tables going into the details by regions, as well as individual roads, and practically all large carriers are included, a few of the smaller ones having been omitted, which omissions would not affect the results to any great extent, and a few other roads operating a total mileage of 1,032 miles having been delinquent in making reports to the commission.

On bituminous coal the figures are shown both for contract coal and spot coal, there having been 17,960,540 tons more bought on contract purchases than in the previous year and on spot purchases 13,475,587 net tons more.

The situation in New England differs quite noticeably from that throughout the rest of

the United States, the increase there in the delivered cost for bituminous coal having been \$2.92 per net ton and at the mine \$1.27 per net ton for contract coal and \$3.79 for spot coal.

GENERAL SITUATION.—With the convening of Congress the transportation problem will undoubtedly be given a very thorough overhauling. The President in his message referred to the necessity of reducing rates. Senator Cummins has introduced a resolution requiring a general investigation of the whole problem. The National Agreements, so bitterly opposed by the carriers, have already been abrogated by the Railroad Labor Board, effective July 1, and the various organizations and individuals interested in transportation are forming their plans to urge upon Congress amendments to the recent Transportation Act which will make possible a solution of the labor controversy, a reduction in the expenses of the carriers, a lower basis of rates and a general return to normal conditions on the railroads of this country. The present administration has shown indications of going about these problems in a businesslike way and with a real conception of just what the troubles are. But it is not probable that there will be any legislation affecting railroads before late summer because the tariff and revenue measures are being insisted upon from many sources and have already been placed first on the program of Congress. Meanwhile, the shipper will probable have to continue to pay the high rates and hope that the railroad managers, now that they have been given opportunity by the Railroad Labor Board, will get together with their employees and effect some sort of an arrangement that will make it possible to eliminate the iniquities of the National Agreement and at the same time give the men who do the work a fair, reasonable wage, for which those men will be expected to do a fair, reasonable day's work. It seems apparent to the onlooker that great savings can be made without working any real injury to anyone, and if the carriers and

employees will cooperate we should have, beginning with July 1, a return to normal conditions which will make possible a reduction in the abnormally high rates now being paid by the shipper.

If one studies the tonnage and revenue figures of the last few months he cannot escape the conclusion that the present basis of rates not only does not give the carriers what they expected but actually deprives them of much revenue which they undoubtedly would get if the rates were not prohibitive. When a farmer, a manufacturer or shipper of any kind finds that his goods will not bring in the market what it costs him to transport those goods, then he is forced to discontinue his shipments, and it is quite evident in many instances that the rates today absolutely prohibit the shipment of numerous commodities.

The last reports available, which are for the week ended April 8, show that there were 507,427 idle cars on the railroads, and this figure is approximately 21 percent of the total number of freight cars owned by all the railroads in this country. This is an increase of over 11,000 cars as compared with the previous week, and an increase of 210,000 since the first of the year. More than half, or 261,294 of these cars, were coal cars, and this is the largest number of idle cars ever reported by the carriers. For the week ended March 31 there 495,904 surplus cars, and that was also a record, and more than half of this surplus were coal cars, there having been a steady decline for some weeks in the number of cars loaded with coal. For the week ended March 23 the surplus was 459,411, and this is also a record.

REVENUE FREIGHT LOADED.—Owing to the number of cars loaded with revenue freight we find a similar situation. The last report is for the week ended April 2, which shows that there were 21,210 cars less loaded with revenue freight than in the previous week. For the week ended on March 26 the decline under the previous week was 3,855, and for the week ended

March 19 the decline was 10,361, and for the week ended March 12 it was 10,814. These figures show quite clearly that although tonnage was at a very low level it continued to decrease, and that the carriers cannot hope to operate successfully unless we can get a steadier movement of all classes of freight, because the decline is shown in nearly all freight. Merchandise and miscellaneous commodities is the only class of traffic to hold its own, but even this class began to fall in the early part of April and at that time all commodities were showing a decline. Coal has shown the greatest falling off and it brings us to the realization that in a few months we will again be facing a coal shortage, because unless the carriers move during the summer months a large amount of coal, it will be offered for transportation in the fall and early winter, and instead of idle cars we will again face a shortage.

EARNINGS.—The complete reports for January show that the carriers suffered a deficit of \$1,167,800, while 109 out of 202 railroads reporting failed to earn their expenses and taxes compared with 88 in December. In February this deficit increased to \$7,205,000, with 106 out of the 200 roads reporting failing to earn their expenses and taxes. Taking the January figures we find that the roads failed by \$68,439,800, or approximately 102 percent, to earn the amount which they expected under the increased rates. In February this shortage was \$63,804,000. The total operating revenues in January increased 5 1/5 percent over those in January, 1920, and operating expenses increased 6 3/5 percent, while the net railway operating income showed a decrease of 120.6 percent under that for January, 1920. In February operating revenues showed a decrease of 4 1/2 percent compared with the same month in 1920. Operating expenses decreased 7 1/2 percent and the net railway operating deficit was reduced 56 1/2 percent compared with February, 1920, at which time there was a deficit of \$16,561,000. For the six months since the government guaranty to the railroads ceased and the carriers have been getting the benefit of the increased rates the net operating income has been at an annual rate of return of 2 1/2 percent on their tentative valuation fixed by the commission. During the first four months of this period the annual rate of return was 3.3 percent.

This falling off in earnings is reflected in all districts, being greatest in the east and lowest in the west.

DISTRIBUTION OF CARS.—The commission has instituted an investigation into and concerning the reasonableness and propriety of the present car distribution rules in so far as they apply to privately owned coal cars and cars furnished for railroad fuel coal, with a view to prescribing just and reasonable rules and regulations. In connection with this same investigation the service orders issued by the commission governing the transportation of coal have all been withdrawn and the carriers are now working under their own rules which were

in effect when the roads were returned to private ownership something over a year ago. It is the purpose of the commission to go into the whole subject and draw up for adoption by the railroads whatever rules are found necessary, and any shipper who is interested will have an opportunity to be heard before any definite decision is reached.

FREIGHT COMMODITY STATISTICS.—For the quarter ended December 31, 1920, we find that Class I railroads in the United States originated 9,981,908 carloads of revenue freight and carried 16,520,748 carloads. The number of tons of 2,000 pounds originated was 657,824,294, and the number of tons carried was 1,179,285,738. Under the heading of "Products of Mines" we find that this class of freight was responsible for 4,010,562 of the carloads originated, or not quite half of the total number, while 6,942,123 carloads of revenue freight handled was credited to the products of mines. The mining interests were responsible for 193,413,417 tons of the revenue freight originated and 332,377,717 tons of the revenue freight carried.

ONE REASON WHY MINES CLOSE

THIS is the heading of a brief editorial in the *Oatman Mining News*. That the heading is appropriate will be conceded by anyone who reads the article, which is as follows:

"A man in the southern part of the state who happens to be in the lumber business gave one good, big reason why the copper mines are closing. Note the figures what a carload of lumber cost in Oregon and what it cost laid down in Arizona. Timber cost at the mill in Oregon, \$187.40; freight, \$865.40; war tax, \$25.96. Did you ever hear of anything more eloquent than the above figures? High freight rates, high passenger rates, and high railroad wages is strangling business. There is no chance of escape; nothing to do but quit, until the men that own the roads and the men that run the roads come to their senses. They are blocking the nation on its road to recovery. There will be no real prosperity until the railroads carry freight and passengers at a fair rate."

MINE RESCUE CAR ITINERARIES

ITINERARIES of mine rescue cars are as follows:

Car No. 4: Scofield, Utah, April 28 to May 7; Winterquarters, Utah, May 9 to May 14; Clear Creek, Utah, May 16 to May 21; Castlegate, Utah, May 23 to June 4; Cameron, Utah, June 6 to June 11.

Car No. 10: Hancock, Michigan, Quincy Mine, May 2 to May 7; Mason, Michigan, Quincy Mill, May 9 to May 14; Mohawk, Michigan, Mohawk Mine, May 16 to May 21; Gay, Michigan, Wolverine Mill, May 23 to May 28; Houghton, Michigan, Michigan College of Mines, May 30 to June 11. *

CANADIAN MINERS ALSO SUFFER FROM HIGH FREIGHTS

AMERICAN RAILROADS are not the only ones to find freight rates can be boosted so high as to curtail shipments. Likewise, American operators are not the

only ones who complain against the imposition of tariffs which make mining unprofitable. The situation in the United States has its counterpart in Canada, as seen in the comment of the *Mining & Engineering Record*, (Vancouver, B. C.):

"The Railway Commission of Canada has proved itself one of the worst enemies of the Dominion, and the Commissioners should be individually impeached and held accountable for the mischief they have done the country in the past few months. By their haste to imitate the United States railway policy in raising the railway rates they killed the lumber business, shut down the mills, and threw out of work thousands of mill hands and loggers; while they stopped the shipping of ore over the railways to distant points and closed down a number of mines, throwing out of work a large number of men engaged in that industry also. The Railway Commission has thus inaugurated a policy which has had a most mischievous effect on the trade, industry and wealth production of Canada. No labor strike has ever done anything like the same amount of mischief. Now the railways are in turn crying out that their business has gone to pieces and thousands of railway employees have been laid off, so the Railway Commission has even wrecked the business entrusted to its care. Not satisfied with this folly it has now authorized an increase of express rates which will be attended with proportionately bad results. This is a time when prices of commodities are falling, and railway services, wages, and all costs entering into production must be brought down if this country is to prosper and maintain its place in trade and commerce."

OIL AND GAS PERMITS

THE FOLLOWING permits to prospect for oil and gas have been issued by the General Land Office: (Figures refer to acreage.)

Alaska. Juneau District: Carl E. Martin, 2560; L. D. Ellison, 2560; Wm. C. Hunt, 2560; M. J. Conroy, 2560; John Miller, 2560; Wm. Munay, 2560; Wm. A. Bigelow, 320; W. H. Rager, 2560; K. C. Schuyler, 640; Geo. C. Henderson, 2560; Warren Palmer, 2560; Cam Campbell, 800; R. H. Elder, 2560; Tony McGowan, 2560; Rosalie M. Donahue, 2560; James Hodnett, 2560; Fred. L. Nehf, 2560.

Arizona. Phoenix District: Isham Chastian, 2560; John R. Loomis et al. 2379; Chas. M. Connor, 640; T. H. Gracey, 2560; Sims Ely, 1280; J. R. Smart, 1280; Jerome Adamana Oil Association, 1279; Wm. A. Moore, 1280; W. T. O'Connell, 2560; J. E. Tompkins, 1268; Caroline Keith, 640; W. R. Coates, 541; Irene E. Robinson, 640; John W. Cairns, 2560; Wm. A. E. Hult, 2560.

California. El Centro District: Loyd Phelps, 320; C. L. Gillet, 2560; Joe Jardin, 2566; Wm. L. Hubner, 639; Legion Oil Co., 480; Herman L. Welch et al. 2560; J. E. Armstrong, 2560; Oil & Drilling Co., 2505; Geo. C. Harbolt et al. 2560; M. C. Plasehard, 2560; Austin S. Taylor et al. 2560; J. St. Paul White, 320; Waltham O. Ramage, 2560; Eli P. Williams, 2560; Lewis H. Francisco, 2560; Otto J. Prundy et al. 2553; Ross T. Hicheox et al. 329; Erwin J. DelPorte, 1453; Clarence E. Smith, 2562; Edward Schoeppe, 1280; C. D. Hartshon, 2560; J. P. Walsh, 1600; Ramer O. Kendall, 2560; Mortimer Coyle, 2560; Jas. T. Coyle, 2560; Janet A. McGahan, 640; Oella B. Lewis, 2579; Robt. Hays, 2560; C. L. Gillett, 2560; David Godfrey, 2547; Albert B. Bowden, 960; Henry J. Levy et al. 1910; C. L. Gillett, 2560; Fred Briggs, 2560; Lorin Case, et al. 2560; C. F. Kann, 2538.

Independence District: Wm. Cleveland,

2560; Wm. Voelker, 2539; Albert F. Lange, 2557; J. B. McLees, 1900; C. J. Coleins, 2560; E. V. Carley, 2560; Moses H. Bixby, 2562; H. H. Hancock, 2560; Jas. C. Buyers, 2540; S. L. Wilson, 2492; Catrienne Gymen, 2554; A. C. Reed, 1920; Jas. W. Means, 1920; Jas. A. McCall, 2514; Jas. A. McCall, 2560; F. M. Berger, 2560; Arlton L. Stevenson, 2559; Thos. F. King, 2560; Alice G. Ford, 2538; V. N. Reed, 2515; Fred A. Lydy, 2563; H. H. Waugh, 1920; Chas. H. Farrow, 2540; Ben Weingart, 1920; Harry Lindsey, 2560; Ella C. Nelson, 2560; Wm. S. McCall, 2560; Thos. Cooke, 2560; F. M. O'Connor, 2560; Geo. J. Schaffer, 2548.

Los Angeles District: Chas. A. Anderson, 720; Cajon Basin Oil & Gas Co., 2514; Margaret M. Chambers, 160; Noah Adair, 2075; O. F. Scott, 2400; Painted Hill Oil Assn., 2380; Israel Weisly, 1600;

San Francisco District: Belridge Oil Co., 2101; John B. Jaqua et al. 2554; Henry Malson, et al. 2560; Frank J. Carr, 920; A. L. Sage, 2240.

Visalia District: Chas. C. Lamberson, 80; Gustave Linderman, 160; Joe H. Bendiet, 480; Earl H. Daggett, 400; Belridge Oil Co., 2101; Devils Den Con. Oil Co., 80; John Sloan, 320; Rudolph, Pollak, 360; John Z. Benedict, 160; Harry Lindeman, 160; E. L. Blanck, 480; Ernest Reingpack, 160; Isadore Newman, 160; Wm. C. VanAntwerp, 80; Thos. C. Scott, Jr., 240; Geo. Eamhart, 160; T. J. Sans Souci, 640; Jos. Baumgartner, 240; Chas. E. Manley, 160; Fannie Higgins, 160; Ivey Young, 160; Eva C. Slover, 528; Sol A. Rehart, 1691; Saml. Sanborn, 1280; Grove T. Vail, 80; James W. Skagg, 1440; Geo. F. LaDam, 160; Don C. Aldridge, 641; Javed How, 408; Samuel H. Hain, 1222; Jeremiah P. Eaton, 320; Robt. G. Lauer, 440; A. K. P. Hannon, Jr., 1120.

Colorado. Glenwood Spgs. District: Robt. G. Stovall, 2560; Donald C. Bromfield, 1442. Montrose District: Robt. A. Ross, 1440; Inland Oil & Refining Co., 2480;

Idaho. Haily District: Lester M. Campbell, 1080; Perrie E. Papineau, 80; H. P. Schofield, 320; Columbus E. Jenkins, 320; Earl E. & Frank A. Peterson, 240; Chas. H. Upton, 2090; Clyde M. Hardy, 2550. Boise District: E. V. Barg, 2560; Joel Potter, 2174.

Mississippi. Jackson District: John Seabon Hinton, 890.

Montana. Bozeman District: Arthur E. Edgeton, 310; Chas. W. Nay et al. 320.

Glasgow District: South M. West, 319; Saml. E. Bumley, 2561; Bertha Nelson, 646; Clarence C. Calhoun, 240; Wm. A. Armstrong, 2912; Samuel H. Burnley, 2560;

Great Falls District: Walter S. Myers, 2240; Christine A. Villars, 2280; Jeannette Wilmer, 1280; Jas. H. Mills, 343; Leta Neat, 190; Louis O. Hogue, 881; Walter S. Lugden, 240; Alice Fremingh, 220.

Hailey District: Raft River Oil & Gas Co., 2560.

Havre Dist: John F. Foster.

Lewistown District: Henry O. Hilton, 1720; K. R. Rorabeck, 640; Alice Rino, 160; Loren Oldham, 120; Roy W. Winston, 2440; Evers Oil Co., 800; Chas. F. Williams, 320; Frank Coleman, 945; Arthur L. Chapman, 1240; Henry L. Tierney, 160; John Berkin, 1560; Harrison B. Martin, 440; John M. Howland, 40; Chas. A. Haddath, 234; Thowald Wygaard, 400; Joseph A. Jones, 833;

Miles City District: Clyde E. Waddingham et al. 2555; Chas. A. Westphal, 2549; Miriam O. Meyerhoff et al. 2557; Ernest Cornell, 800; Harry J. Huene, 2226; Leslie McGrath, 120; Leo O'Connell, 320.

Nevada. Carson City District: Marshall H. Alered, 2560; Asa C. Burge, 1920; Crystal Oil Co., 160; Chas. J. Mullen, 1603; John G. Ford, 960; J. W. Dignan, 1280; John F. Kunz, 440; Willard W. Brown, 1280; C.W.

Ritter, 640; John F. Wilson, 2560; Wm. R. Aerne, 2560; Mrs. P. H. Westlake, 2560; L. W. Hunsinger, 2560; Eugenia Howard, 2560; Howard J. McDonald, 960; Jos. Guyot et al. 320; Joe E. Gregory, 2560; Nev. Western Oil Co., 640; Volney B. Terrell, 1280; John W. Nichols, 480; Geo. F. Moore, 1120; Lem L. Allen, 2240; Ernest W. Mower, 160; Martha I. Nichols, 160; Chas. W. Hoover, 320; Rebecca Johnson Bon, 2560; Harry G. Pugsley, 640; Wm. D. Atkinson, 1000; John E. and Lynette P. Copson, 2560; Ben A. Nichols, 640; B. A. Boucher, 2549; Capital Oil Syndicate, 160; Mrs. T. Gordon Bracking, 560; Harold D. Atkinson, 280; Chas. H. Kramer, 1434; R. M. Preston, 480; Jos. Jarvis, 2560; Fred J. Franke, 2523; Delbert E. Williams, 2560; Wm. T. Chamberlain, 2536; Wm. E. Maupin, 2557; W. Ray Streeter, 640; Fallon Business Men's Oil Association, 2320; John W. Flood, 2560; Ralph P. Burns, 640; Gavin Baird, 640; Charles L. Drumm, 2400; Sarah Eliz. Coniff, 520; John R. Jones, 320; Edward D. Walsh, 1277; Harry A. Durseater, 624; Josephine Graham, 120.

Elko District: White River Oil Co., 2560; Consolidated Illipah Oil Co., 2523; Mary A. Colburn, 2560; Illipah Petroleum Co., 2560;

New Mexico. Ft. Sumner District: A. B. Roehl, 2175; Wm. G. Robertson, 2260; Gulf & Pacific Oil Corp., 1001; G. L. Rogers, 2480; C. L. Creighton, 2440; Thos. J. Dillon, 2543; Robt. C. Northcutt, 2236; John E. Adams, 2560; Harry G. Howley, 1920; Wm. H. Earickson, 2560; Lawrence E. Lund, 2559.

Las Cruces District: Dean W. Bloodgood, 2440; B. F. Elser, 1280; Albert Fay Fish, 2560; W. B. McBeater, 2560; C. A. Thompson, 1280; L. M. Elser, 640; M. L. Bloodgood, 2560; W. L. Elser, 280; R. P. Elser, 2558; Austin C. Gile, 2556; Vincent B. Mays, 2560; Sarah VanVleeck, 2560; Francis C. Merrell, 2560; Henry L. Newhold, 2478; Frank A. Hawley, 2399; Philip M. Gallaher, 2554; Geo. W. Frenger, 2517; F. C. Hallaway, 2568; F. W. Weed, 2207.

Roswell District: J. V. Atwood, 1560; F. Grant Keyes, 2400; W. C. Winston, 2567; J. D. Mell, 2080; H. P. Saunders, 1600; W. J. Alter, 2555; Harry J. Stewart, 2560; Emily D. Brough, 2548; Winfield L. Markham, 2545.

Santa Fe District: Elmer C. Hatcher, 248.

Tucumcari District: John T. White, 1040.

South Dakota. Rapid City District: Percy H. Helin, 40; Joseph Fox, 80.

Utah. Salt Lake City District: Wm. J. Cowan, 2560; Gerrit B. Lansing, 2560; Arthur G. Trumbaugh, 2160; A. F. Steretts, 2560;

Wilson P. Purtt, 1680; Patrick Sullivan, 2560; Louis Hockels, 2560; John Hockels, 2560;

Bessie Moofing, 640; H. A. Rich, 2240; Ira R. Browning, 2400; M. E. Hickman, 2560; E. P. Bacon, 2560; Montford J. Ryan, 2560;

Russell G. Schulder, 1360; Alfred H. Westall, 2560; Chas. Allen, 2560; Wm. Johnston, 2560;

Guy Lewis, 2560; Ambrose Shinty, 2560; Lee S. Hake, 2560; Morris L. Allen, 2520;

Chas. A. Rice, 1200; Rembrandt Peale, 2560; Midwest Ref. Co., 1960; Reuben S. Boyle, 640; John W. Hay, 2560; C. O. Markham, 2480; J. M. Snow, 2560; Miner S. Cussey, 2560; Roger W. Powers, 2560; W. L. Bierbach, 2560; Harry E. Moon, 1600; Arthur H. Bosworth, 2560; Floyd Fetner, 2280; P. R. Hailey, 2240; Rufus C. Hill, 2200; Fred E. Warren, 1280; David H. Cannon, 2560;

Carter Oil Co., 2560; H. C. Chappell, 2560; Arthur K. Lee, 2450; Wm. C. Stark, 2560;

C. S. Fischer, 2400; A. N. McKay, 2560; F. K. Smith, 2560; Bessie Mooring, 2560;

W. F. Earls, 2560; A. L. Dickson, 2560;

Chas. K. Wiese, 2560; C. P. Quinlan, 2560;

Alfred Kress, 2560; John H. Glenn, 2240;

Geo. E. Cramer, 800; M. J. Gotteberg, 640;

Ralph A. Harding, 2560; Chas. Tying, 2560;

J. W. Hay, 1760; David J. Lemmon, 1669;

Herbert V. Lacy, 920; F. H. Morrison, 2160;

A. R. Lee, 2560; Erasmus S. Borgguist et al, Anna Erickson, 2560; J. B. Scharta, 2560;

Walter J. Schultz, 2560; Mike R. Johnson, 2560; Orvis A. Relf, 2560; Alvin V. Taylor, 2498; Roger W. Powers, 2560; Mary E. Anderson, 1600; Franklin E. Bard, 2560;

Henry E. Goodwin, 2400; Chester E. Goodwin, 2400.

Wyoming. Buffalo District: Ursula S. Gatchelle, 2037; C. L. Sackett, 2459; Wm. Edgar Dowine, 640; Wm. J. Thorn, 977; John G. Hoge, 480; Bert C. Prescott, 753.

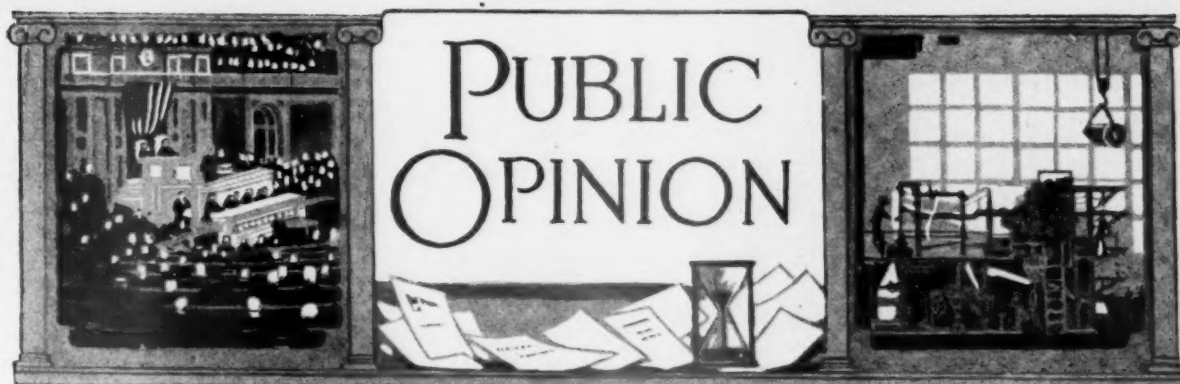
Douglas District: Amer. Exploration Corporation, 2237; Claude L. Freeland, 2560; Harry L. Funkhouse, 2560; E. T. Glenn, 40; Orlando McDonald, 1762.

Cheyenne District: J. O'B. Keener, 632; C. H. Anderson, 160; Centennial Valley Oil Co., 440; Laramie Red Desert Oil & Gas Co., 440; Laramie Red Desert Oil & Gas Co., 640; Robt. C. Middlewood, 320; L. C. Graves, 320; M. C. Greenfield, 2236; Green Mt. Oil & Gas Co., 2360; Wm. E. Marvin, 160; Peter W. Rourke, 320; Arthur C. Gehr, 1280; Harry J. Neely, 1280; Jason G. Louison, 2560; Geo. O. Stephanson, 160; Walter W. Gillett, 1880; L. A. VonTillberg, 160; J. Edison Hines, 2554; W. G. Van Slyke, 2556; Raymond Barber, 1920; E. A. Rogers, 2540; James M. English, 480; Maurice M. Armstrong, 1280; S. P. Hall, 1600; Jos. W. Bingenheimer, 2480; Clinton E. Bivens, 2040; O. E. Ekdahl, 2560; Carl G. Johnson, 2560; M. C. Greenfield, 80; Graddus R. Hagens, 1560; W. R. Williams, 640; Wm. J. Lindsay, 2200.

Evanston District: T. E. Fitzgerald, 2227; Hugo B. Anderson, 2560; W. L. Alison, 886; J. L. Greenwood, 1190; Wm. Aujzman, 2347; H. R. Cole, 2240; J. Edward Swift, 1924; J. Tracey Wooten, 2400; Herman Strauss, 1920; J. R. Leland Watson, 2408; W. W. Wilson, 2079; John H. Wooten, 2047; Thos. O. Glasgos, 840; E. J. Evans, 2482; L. J. Gallentine, 2538; J. A. Rasmussen, 2560;

Lander District: Ira A. Mayfield, 160; Wilson N. Dickerson, 1199; Frederick W. Leete, 1340; Clyde W. Atkerly, 2556; Jacob M. Achwoob, 1265; Lloyd Robbins, 120; Otto J. Rausch, 1853; Indiana Oil & Mining Co., 2237; Clark E. Longshore, 1280; Thos. Ouine, 960.

Newcastle District: Jas. P. Kern, 2162; Robt. G. Cose, 840; Joe W. Barnwell, 880; Jas. Todd, 40; P. R. Heily, 2240; Wm. P. Dudley, 354; Richard P. Ford, 920; Jas. S. Love, 800; Eugene A. Pock, 1253; Wm. M. Kimbrough, 800; John H. Pettey, 1000; Trustee of Blind Pool Oil Syndicate, 2360; Otto Olston, 1280; Jesse A. Smith, 482; Cornelius Williams, 2280; W. S. Barnett, 1735; Clarence E. Loney, 200; Clyde Early, 2356; Thos. L. Coates, 320; Walter E. Coates, 640; Albert B. Olston, 2400; Frank M. South, 40; Ed. J. Dyson, 200; J. A. Tyson, 720.



QUESTIONS OF THE DAY DISCUSSED BY STATESMEN AND BUSINESS MEN

CORPORATIONS ARE NOT "SOULLESS"

A STATEMENT of ELBERT H. GARY, chairman of the United States Steel Corporation, is characteristically to the point and interesting. Mr. Gary takes issue with the statement that a large corporation has no soul. In part he says:

"Whether or not the statement is literally true might depend upon your definition of the word 'soul.' A soul is a controlling influence, possessed by individuals, corporations or states, which recognizes as of equal importance the rights, interests and welfare of themselves with all others. The management of a corporation fundamentally stands in a position of balance between three general groups or factors: the security holders, the general public and the masses of the working forces. These must be recognized as rightfully in control. It will be cheerfully admitted that the interests of the general public, are first to be considered. When they clash with private interests, the latter must be subordinated. On this principle our Government is founded. During the twenty years of our existence there has not been material hostility shown or serious complaint made to the management by our workmen themselves, either individually or in committees or groups formed by them which has not been cheerfully considered by the management and promptly disposed of to the mutual satisfaction of both parties. As stated, with repeated publicity, we do not combat labor unions as such. Personally, I believe they may have been justified in the long past, for I think the workmen were not always treated justly. But whatever may have been the conditions of employment in the past and whatever the results of unionism, there is at present, in the opinion of the large majority of both employers and employees, no necessity for labor unions. In discussing the question of labor unions it should be always borne in mind what is commonly known or overlooked or, at least, minimized, that in the United States not more than ten to fifteen percent of labor is, or was, at its highest point during the war, actually included in the membership of the unions.

Also that the workmen do not voluntarily join the unions, do not seek the opportunity, do not search for leaders to form and maintain organizations. I am not discussing what is the fair proportion or division of the proceeds of business, between capital, labor and consumer. Possibly there is a solution of or antidote to the labor union problem. I do not believe in socialism; in governmental management or operation; but I do advocate publicity, regulation and reasonable control through government agencies. Members of commissions or departments should be non-partisan, non-sectarian, based on qualification and moral character. Their decisions should be subject to review by the highest courts. Laws—clear, well defined, practicable and easy of comprehension—covering these matters, might be passed, and if so they should apply to all economic organizations, groups or bodies exceeding certain specified numbers or amounts. Both organized capital and organized labor should be placed under these laws. Each should be entitled to the same protection and be subject to the same restrictions and provisions. Will labor unions consent to this? They have heretofore objected. Here would be a test. Labor union leaders have before now asked and received discriminatory exemptions. This is wrong and it would be just as bad if the situation were reversed. Employers generally desire only the same treatment that is accorded to labor unions. The large majority of workmen also would be satisfied with this standard.

HONEST WORK OR CLOSED INDUSTRIES

"GET TOGETHER" is the advice which C. F. KELLEY, President of the Anaconda Company, gives to both employers and their union workmen. In a recent discussion before a convention of mine operators and representatives of labor organizations, Mr. Kelley made a very proper analysis of the labor situation as it is affected by existing conditions. He impressed the idea that employers, many of them at least, were not antagonistic to unions, but that common sense demanded that they oppose certain methods which all too frequently are adopted by the unions. We quote from an account of Mr. Kelley's address:

"There is no business in the United States

that has been hit as hard as metal mining business.

"The labor of the Anaconda Company gets ten cents for every pound of copper that we produced. The freight and refining expense is approximately 2½ cents, so that nearly all of the 12½ or 13 cents we received for a pound of copper was given to you and to the railroads—so that there is not much core left for the Anaconda Company. In addition to what we pay you and the railroads, we have to find money for coal, timber and other supplies. * * * I don't care what the propaganda of the I. W. W. or the Wobblies is, or what your views about the capitalistic system may be, but I do know that on the first of the month the Anaconda Company has to pay its bills, and I do know that it has been difficult to find money enough to pay them.

"I haven't any use for a narrow employer, any more than I have for an agitating radical; one represents a type that is as far wrong from an employing standpoint as the other does from the standpoint of an employee.

"I believe you have a right to organize as long as you act squarely and fairly upon the broad principles of union organization, but there is one thing I don't think you have a right to do and that is impose unnecessary, burdensome, grievous and oppressive restrictions upon industry and I haven't any hesitation in saying that I think you have been guilty of doing things that are costly, inefficient and oppressive in your actions toward us.

"The principle objections the employer has to trades-unionism come from the tendency to preach a slowing up on the job and the constant claim as skilled work that which is not skilled, because skilled work commands a higher rate of pay. There has been no place where we have suffered from these things more than we have right here in Butte.

"It is constant fighting over the jurisdiction of work that makes oppressive conditions. If we can establish reasonable conditions, reasonable rules under which we can go ahead and do business, and if we can cut out these grievances which we feel are foolish and oppressive, there is no reason why we cannot proceed amicably, fairly, decently and self-respectingly and co-operate in our work.

"If we can get down to a decent basis with one another, one that is fair, we are ready to go ahead, and if we cannot, we are ready to break. * * * If we agree, we will continue just as we have in the past to try to live up to our obligations and expect you to live up to yours, and if it comes to the point where we must break, it is a break for good."

PROTECTIVE TARIFF NEED POINTED OUT

THE QUESTION of a protective tariff is of intense interest to the mining industry and when such an authority as SENATOR BOISE PENROSE gives voice to an opinion as to the outcome of the present tariff deliberations, that interest is intensified. The *American Metal Market* of April 20 quotes Senator Penrose as saying:

"The general tariff bill will not be ready for introduction in the House until September. It will carry advances in the duties on lead and zinc and probably a duty on tin which will not exceed four cents and may not exceed two cents a pound and that only as a protection to American tin smelters. To give protection to the American smelter there must be some duty on the metal, with a correspondingly lower duty, or no duty at all on ore and concentrates. The *American Metal Market* expresses the opinion that the prospect of securing revenue by a heavy duty on tin to the disadvantage of American industries using the metal will be foregone, and the duty, if any, will be small and only sufficient to supply a basis on which to arrange some protection for the tin smelting industry. The present administration is on record for the full protection of American industries, and anything except a small duty on tin would be inimical to the hundreds of American industries using tin as a raw material."

CURRENCY COMPTROLLER ON MARKET SITUATION

WHEN AN OFFICIAL of the government is induced to make a public address the country at large is eager to learn what attitude is being taken and when the Comptroller of the Currency speaks great interests surround his utterances. D. R. CRISSINGER, Comptroller of the Currency, in an address before the Louisiana Bankers Association, said:

"I have liked to think of the parallel between the tides and currents of the mighty oceans, and the movements of economic forces that answer to the law of supply and demand. The situation with regard to tides and mighty oceans is precisely the same in this day of world-wide neighborhood in economic and financial affairs. Nature abhors a vacuum and so does the economic world. We all know that the war and the subsequent interregnum that was neither war nor peace, did decidedly suspend the normal laws of trade, finance, exchange. These have not yet resumed their sway. We have had overproduction of credits and of printed money, under production of pretty nearly everything else; and along with these has gone an interruption of physical transport and financial exchanges that has depressed the capacity to consume and thus left the appearance of excess production even in lines in which there was nothing of the sort.

"We must recognize the big facts in this matter. One is that European rehabilitation must be slow and its reflection in more favorable business conditions very gradual. The other is that our own country presents to us the market in which we must always do most of our business and on which we shall chiefly depend for establishment of industrial prosperity. There is plenty of consuming capacity here, if we could only make it possible for the potential consumers to buy those things they would be glad to consume. If we can find means to keep our own people working, producing, earning, they will spend their earnings buying the things they have pro-

duced, and we will presently see the tides of prosperity running stronger.

"I am not among those who greatly fear a so-called unfavorable balance of international trade. Neither am I one of those who note with complete satisfaction the tendency of the world's gold to bank itself up on this side of the Atlantic. Gold is not particularly useful as an article of diet or clothing or housing. Its function is to provide a generally accepted basis of the money systems on which exchanges depend. If I am correct in the impression that we need to keep our machinery of production working, then we must do everything possible to enable our farms and mines and mills to keep busy. We must help our own people to be able to buy their products. We must also help the outside world to maintain a money system in such relation to gold that exchanges will be possible. Therefore, as to the domestic problem, we must extend, through our financial instrumentalities, every encouragement to the producer. The farmer must be assured, right now, that in his effort to buy fertilizers and seed and implements and labor for the next crop, he will be given the fullest support, the broadest credit, that can possibly be extended through the banks, and that the federal government and its banking structure will stand squarely back of individual banks that wisely and in moderation extend necessary credits for these purposes. Credit as a basis of production there must be; credit as an incentive and means to mere unproductive speculation, there must not be.

"I do not want to be understood as suggesting that the government can be relied upon to do the things that private enterprise, thrift and effort must do, but I am willing that you should very definitely understand me to mean that every possible support and encouragement, consistent with sanity and soundness, based on the consolidated credit and authority of American business and the American government, will be held out in this time of trial and stress. It is useless to worry now about the grists that might have been ground with water that has already gone over the dam. It is enough for the present to say that, although indeed tardily, these problems are going to receive the most prompt and intelligent attention that can be given to them. I am confident that the readjustment of affairs in Europe and in the world at large gives gratifying promise of moving forward in the near future more rapidly and on safer lines than at any time since the armistice."

U. S. REGULATIONS RETARD ALASKA

ALASKA WILL NEVER DEVELOP under government ownership, in the opinion of FALCON JOSLIN, a Seattle mining man. In a recent address Mr. Joslin said:

"We have government ownership in Alaska of the telegraph system, of railroad building, of fur seals and coal mines. That means that all these industries are dead to private enterprises and healthy growth. The country will develop slowly, if at all, under a leasing system with government regulation and control.

"Words can scarcely describe without disrespect, the penurious and oppressive policy of the government relative to the coal and oil resources of the territory. The history is shameful. The country cannot grow without fuel and it will grow slowly or decline as long as it is obliged to import its fuel, as it has been obliged to do for ten years past.

"If capital and industry in Alaska were given as fair and liberal treatment as they had when the western states were new, Alaska would show a growth instead of a decline.

"The real trouble with Alaska is bad government. The seat of administration is in Washington and those who exercise the power get their information by hearsay."

Census figures which show the population of Alaska declined from 64,356 in 1910 to 54,953 in 1920, were quoted by Mr. Joslin.

"One, and that the most serious, cause of decline in population was the action of the government sixteen years ago in withdrawing all the coal and oil lands from location or sale."

DUTIES OF WAR FINANCE CORPORATION

THE REVIVAL of the War Finance Corporation, which met with such general approval, has met with a sustained interest in just what it would consider its functions now that it has been reestablished. EUGENE MEYER, director of the corporation, has stated what he believes to be the duties of the corporation, as follows:

"It is not within the province of the War Finance Corporation to attempt to influence business, or even to advise business men, how to conduct their business. It would seem, however, opportune at this moment for merchants to consider whether or not conditions in the consuming market, and in the present price levels of materials and goods, do not warrant a return to more normal procedure with respect to the stocks of raw materials and finished goods carried by merchants and manufacturers. It would appear that confidence was great at the high price levels of a year ago when the business risks were certainly larger than they are now. It may be well for business men now to ask themselves the question whether or not the present lower price levels do not warrant somewhat greater confidence than exists at the present time. This is a matter for each and every business man, retailer, wholesaler and manufacturer to consider for himself.

"If greater confidence were warranted as a matter of sound business, and a resumption in carrying more normal stocks all along the line were brought about, undoubtedly a considerable part of the load now being forced back upon the original producers of our agricultural products and the banks in the country districts, would be generally distributed and more easily carried by the merchants and banks interested in the processes that are involved in moving the raw material through the various steps that lead to the ultimate consumer. This distribution of the load would result in a freer circulation of business, and in turn improve that part of the consumer's market, which the producers of agricultural products constitute to so great an extent in our country."

BREATHING APPARATUS NEEDS TO BE SUPPLEMENTED

OXYGEN breathing apparatus is not a perfect protection to the wearer against high concentrations of gasoline and other organic vapors, according to A. C. Fieldner, S. H. Katz and S. P. Kinney, who have written a paper on the subject which has been published by the Bureau of Mines. The authors hold that a life-line should be attached to every wearer of such apparatus, so that on signs of distress he may be withdrawn from the dangerous atmosphere. They hold, however, that such an apparatus is impermeable to all gases ordinarily encountered in mine rescue work.

Mining and Petroleum Digest

TARIFF MUST BE BASED ON WORLD TRADE PRINCIPLES

TARIFF LEGISLATION to be of the greatest benefit to the whole United States must comprehend the world's trade situation today uninfluenced by any provincial or political views. With the knowledge that the present Republican Congress will pass a tariff law, the press of the country has been emphatic in emphasizing the above statement. The GUARANTY TRUST COMPANY of New York emphasizes this statement by saying:

"At a time when vast debts are owed by foreign countries to the United States—debts that are so great that the possibility of payment in gold is out of the question—it is a matter of concern that it should be seriously proposed to erect additional heavy barriers to such payment as might be made through the importation of foreign raw materials, food products and manufactured commodities. A complete understanding of today's world trade situation must guide the course of the tariff legislation which will come before Congress if the United States is to benefit in full measure from her position as a creditor nation.

"The United States, with exports of \$8,000,000,000 in 1920, and with an aggregate favorable trade balance exceeding seventeen billion dollars for the last seven years, now has a very heavy stake in foreign trade, too heavy to ignore or to risk by uneconomic or ill-considered legislation. There was never a greater need for a widespread recognition by the people of the United States of the broad basic principles of trade. The United States must be protected from unrestricted floods of imports arising from the inequalities of wages and depreciated exchanges. Security from these cheap foreign costs cannot be derived from any single, all-inclusive tariff, it might be found in a more flexible arrangement, by treaty or otherwise, which would equalize the selling prices of varied foreign goods in our markets.

"If wisdom and foresight characterizes our action toward foreign nations in the next few years, there is nothing that can dislodge us from a position of leadership, both in trade and in finance. It will be unfortunate if we risk this great opportunity by a shortsighted and provincial outlook upon the present situation.

RELATIONS WITH MEXICO

A WHOLESOME BREEZE from the north began to blow into Mexico on March 4," is the opening sentence in an editorial on "Our Neighbors To Southward" which appeared in the *Boston News Bureau*. Taking the position that "watchful waiting" is now at an end, the editorial comments especially upon the effects which will be produced in Mexico by the knowledge that Secretary Fall and Secretary Hughes are now in the cabinet:

"The new Administration, while insisting

on the square deal, will undoubtedly allow generous time to bring about the right state of affairs, provided evidence is given that the proper course is being pursued. If not—

"The selection of Charles E. Hughes for secretary of state and of Senator Albert Fall for secretary of the interior is the answer. The two are as one on the Mexican situation. Hughes knows of the long list of Mexican atrocities against Americans, of the protests filed at the department of which he will shortly become head, and of ineffective action thereon.

"Senator Fall's attitude is a matter of public knowledge. It may be taken for granted that his views are acceptable to Mr. Harding. He has been the latter's close adviser since the election, and as a member of the cabinet will wield a dominant hand on this one phase of international affairs, if on no other, even though the subject is outside the scope of his department. And Mr. Hughes, though not given to a division of responsibility, will be so thoroughly of the same mind that there will be neither dissension nor rivalry.

"Mr. Hughes has already spoken to naughty Costa Rica and Panama. Mexico will undoubtedly not court words of reproof from him. It knows they would be meant."

CUSHING SAYS COAL PRICES WILL NEVER RETURN TO NORMAL

A SUBJECT which is of vast concern to every person in the country is the question of the price of coal. According to GEORGE H. CUSHING of the American Wholesale Coal Association coal prices will never return to their old level. Mr. Cushing says:

"Labor cost of producing a ton of coal used to be from 82 to 92 cents a ton, while today the cost in the same mines ranges between \$2.14 to \$2.19. Cost of supplies is 36 cents against 6 to 10 cents; and cost of overhead is 55 cents a ton minimum against 8 to 12 cents formerly. Total cost of production has risen from about \$1.14 to about \$3 and in addition the average freight rate has increased from \$1.41 a ton in 1914 to \$2.51.

"Out-turn cost at the point of discharging the railroad car has thus increased since 1914 from an average of \$2.56 to a minimum of \$5.51, allowing nothing for cost of selling and profits.

"Profits of the coal industry in 1920 cannot yet be determined, few companies having yet completed income tax returns, but estimated net margin after selling cost on 13,000,000 tons is 31 cents. Out of this 31 cents the wholesalers paid excess profits taxes of about 15 cents, leaving a net margin of some 16 cents. From this was deducted about 4 cents as interest on borrowed money, leaving net profit to wholesalers approximately 12½ cents a ton or 9½ cents on invested capital.

"By way of comparison, in 1914, gross margin averaged 7½ cents a ton before deducting selling cost. In other words, out of pocket selling cost in 1920 was four times the pre-war gross margin which covered selling cost and profit. Average gross margin in 1920 was some eight times the total gross margin in 1914."

UTAH CHAPTER COMMENDED

EFFORTS of Utah metal producers, through the Utah Chapter of the American Mining Congress, to secure the enactment of needed national tariff legislation, have received editorial commendation from the *Salt Lake Tribune*. The *Tribune* points out that the copper situation is not the only troublesome factor in the life of Utah producers, and continues:

"The metal producers of the state are preparing to make a vigorous campaign before the special session of congress to obtain relief through protection against importations of foreign lead. It is evident that such relief cannot await the enactment of the regular tariff bill, even should its passage come as expeditiously as the most optimistic expect. Efforts will, therefore, be made to protect the domestic producers through anti-dumping legislation. The local metal producers will not attempt to have their products included in the emergency agricultural tariff bill.

"The efforts of the metal producers deserve the heartiest support of all the people of Utah. All do not realize the extent to which the mining industry affects the life of the state. Besides furnishing directly the largest pay rolls, metal mine products furnish approximately 25 percent of the total freight tonnage and are the largest users of power. Every curtailment of mining operations, therefore, immediately affects other important industries and those dependent on them and indirectly affects all citizens of the state.

"In this connection, we are glad to note that Senator King of Utah anticipated the suggestion made in yesterday's *Tribune* relative to the attitude that should be taken by Democratic senators from western states. In a telegram to the Utah chapter of the American Mining Congress Tuesday he expresses sympathy with the plan for relief suggested and promises his support. His attitude is one to be commended to his Democratic colleagues from the western states and, indeed, to all members of the national congress, as the very existence of a basic industry is at stake."

WILLARD THINKS COUNTRY IS ON THE ROAD TO RECOVERY

A QUESTION which the public is more interested in than any other is, "When will the present depression end and when will business again assume a prosperous aspect?" DANIEL WILLARD, President of the Baltimore and Ohio Railroad, believes that we are on our way to recovery. Mr. Willard says:

"We have probably reached the bottom of the business depression. I do not expect to see any rapid increase in business; I do expect to see a gradual but constant increase in business offered the railroads from now on but I doubt very much if we get back to the basis of last October during the present year. The impression which I have concerning the business situation causes me to have a feeling of conservative optimism regarding the future."

'REAL OPEN SHOP WILL WIN, AND IT OUGHT TO WIN'

"INDUSTRY," the publication of the National Manufacturers Association, has been very ably presenting arguments, pro and con, as to the value of the open or closed shop. In a recent issue they publish a statement by Dr. CHARLES AUBRY EATON, editor of *Leslie's Weekly*, which we quote in full:

"The everyday American is for the open shop and against the closed shop. And this definite attitude is not the result of economic or social bias. It is a question of American citizenship. The closed shop will not permit a non-union man to work in it. If he tries to work there he is terrorized by his fellow workmen and driven out.

"The constitution of our country guarantees every citizen the right to work where he chooses. The closed shop, which denies this right and enforces that denial by private and unlawful terrorism, is therefore un-American to the last degree.

"On the other hand, the open shop is supposed to be free and open to any man whether he be union or non-union. This is called the 'American Plan.' And this is the issue upon which the big fight is coming.

"The union leaders tell us that the employers are not sincere; that they are really working for a shop closed to the unions and open to everyone else; and that the open shop is simply a non-union shop.

"The people want to know and must know the truth about this. If the employers who have really struck against the tyranny of unionism are simply fighting for power; if they are seeking merely to wrest power from the unions and transfer it to their own hands, they can never win. The public is sick of despotism and exploitation and hypocrisy. The American people want an open shop in which any man may work.

"The real open shop will win, and it ought to win. It is an American proposition and has public opinion with it. But it has a price attached. If tomorrow the open shop is established everywhere it cannot and will not last the day out unless the employer is willing to pay the price. That price is that the employer shall voluntarily do for his employees, in so far as their demands are just, what now the labor union forces him to do. And further that the employer himself shall become the leader of the men in his employ.

"If the struggle for the open shop is simply a struggle for power rather than an effort to establish justice, it will fail and it ought to fail. But if it represents a real moral movement in which reason and justice are to take the place of brute force in industry, it will prove to be of enormous value to the whole country.

"No man can be the head of an open shop who is not white and true clear through. He must become the leader of the men in his employ or he cannot expect them to turn from the leadership of the union official.

"We want the open shop—but can we pay the price? That is the real issue. The open shop would come without a struggle if employers everywhere demonstrate that they are big enough and good enough to head an open shop. The only way to get rid of tyranny is to put something better in its place."

DISCOVERY OF FLOTATION

APPROPOS of the Minerals Separation, Ltd., litigation over the ownership and use of the flotation process, in which miners and some of the world's greatest scientists are interested, the *Wall Street Journal* intervenes to claim credit of discovery for one who never received any financial advantage

therefrom. Under the caption of "The Observant Washerwoman," the writer says:

"There is considerable interest, just now, in the 'flotation process,' used to refine certain copper ores. These ores consist of rock containing tiny flecks of metallic copper. They are ground to powder, thrown into a tank of water containing about one per cent of oil, and violently agitated. The oil coats these particles of copper and causes them to cohere; they cling together, rise into the dense froth at the top of the tank, and are skimmed off and refined. This was perhaps the most revolutionary advance in copper extraction and has made many millions of dollars for the English-American company which now controls it.

"It was discovered by a miner's wife while washing dirty overalls. As she soused them vigorously in the soapy water, streaked with machine oil, she noticed that the suds showed odd glints of light. When she gathered some in her hand, the bubbles disappeared and left flakes of metallic copper on her skin.

"This was the inception of the flotation process, but what the intelligent and observant woman got from it is not a matter of record."

MOVIE SILVER "MINER" CHARGED WITH BEING NUISANCE

SOLID SILVER is being extracted from the liquid waste of Los Angeles motion picture film laboratories and shipped in ingots weighing forty pounds each to the San Francisco mint. The *Los Angeles Sunday Times* shows that more than \$315,000 worth of the metal is now being recovered annually from waste waters which formerly flowed into the sewers. One of the firm of "miners" was recently arrested on a charge of maintaining a public nuisance, but his court experience was not allowed to interfere with the conduct of his operations.

Precipitation of silver from waste hypo is not a new industry, but the scale of operations of the Los Angeles "miners" is so large as to warrant interest in their methods. Something of this feature is contained in the following excerpt from the article in question:

"The waste solution contains from a fourth of an ounce to an ounce of silver per gallon. The recovered metal is classified by the government as 'foreign' and now is marketed for a sum varying from 54 to 60 cents per ounce. 'Domestic' silver, that which is dug from the ground, sells for 99½ cents per ounce. Mr. O'Neil says there is no real difference in the quality of the two 'kinds' of silver, this merely being the government's method of protecting the mining industry.

"Hollywood, Universal City and Los Angeles produce about 8,000,000 feet of film per month, which is about 90 per cent. of all the negative film made in the United States, though most of the printing is done in the eastern distributing centers.

"The waste hypo is carted in big tanks from the studios to the refining plant. There the tank is swung from the truck and suspended from a scaffold. The solution is then pumped into the big vats where the silver is precipitated by chemicals. After standing in a vat for ten days the silver settles to the bottom of the tank in the form of a black mud, known as 'silver mud,' and the water is drawn off and transferred to another tank. Ten days more are required in turning the 'silver mud' into money, after it has passed through a filtration process and baked in a huge oven.

"When every particle of moisture has been baked from the mud, it is melted with iron and sawdust in a furnace, a process which causes the metallic silver to settle on the bottom of the crucible. The slag is then skimmed from the molten metal and the silver is poured into molds and transformed into forty-pound ingots for shipment to the mint at San Francisco."

LAWLESSNESS OF LABOR LEADERS

THIS is the caption of an editorial in the *Manufacturers Record* which deals with the spirit of lawlessness in America. Not all of the blame is laid to the labor leaders, but a large share of it is. The writer has evidently thought long and hard about the industrial situation, and he arrived at some very pronounced conclusions. We read:

"The spirit of lawlessness, which has been growing constantly in our country, is due in part to the false teachings of the press, many men who claim to be ministers of the Gospel and of politicians who have yielded to the socialistic trend of the hour and ignored the rights of the nonunion labor men. Murder is murder, whether it be committed by the robber who murders for the loot he can get, by the man who murders out of revenge for some fancied injury, or by the labor man who deliberately murders his fellow-man with a spirit of hatred with which he intimidates the fellow-man who does not bow his neck to the yoke of the labor leaders.

"Until men are taught that the murderer, whether he be a union labor man or any other criminal, must pay the penalty in the penitentiary for life or on the gallows for murder, we shall have growing disorder and increasing murders throughout the land.

"The man who insists from the pulpit or through the press or from the political platform that this country must yield to the domination of labor unions, many of whose members are foreign to our ideals and institutions, is merely encouraging the spirit of riot and of murder. The man who upholds labor unions in these crimes, or in the teachings which lead to these crimes, is a criminal at heart, and is responsible for the innocent blood that is shed by all union labor men who, misled by radicalism, seek to vent their vengeance upon other labor men. Until intelligent, law-abiding union labor men assert their supremacy in their organizations and make membership in their unions synonymous with law and order, with efficiency and honesty, the country cannot afford not to demand the open shop as the synonym of America and independence and law and order.

"The tolerance with which law officers and the public have often dealt with the violence of strikers is in itself a crime, provocative of continued growth of criminality throughout the country. By its unwise tolerance of such acts the country itself has almost placed a premium upon criminality. It has encouraged the less intelligent rougher element of labor unions to believe that they have a right to murder their fellow-men, and it is hard for them to understand why this is not true when they are constantly taught from socialistic platforms, from socialistic mouthing political speakers and from the inaction of law officers that they are justified in killing their fellow-workers. We are placing a premium upon criminality, we are sowing the seeds of anarchy, when as a nation we permit such teachings to be spread broadcast throughout the country.

"The riotous conditions around the Cramp shipyard in Philadelphia, the effort to murder men who want to work, to trample down even women who seek to protect their husbands from murder, is only typical of the growing spirit of criminality fired by labor leaders in all parts of the country."

NORTHWEST DIVIDENDS REACH LOW LEVEL

THAT the mining industry of the northwest is apparently in a syncline of depression, is the conclusion reached by the *Northwest Mining Truth*. This publication, which has complete records for ten years, shows that dividends from northwest metal mines during the first quarter of this year reached a record low level. The total was only \$615,250, all derived from four Coeur d'Alene concerns, with both British Columbia and Washington, showing a complete blank for the first time in more than a decade. The article mentioned continues:

"The result is nothing more than could have been reasonably expected considering the severe handicaps under which the industry is now staggering. While labor has become more plentiful and more efficient, thus removing the greatest deterrent factor of the early part of last year, metal prices have slumped badly and there appears to be no assurance of early improvement, except through action of Congress in the matter of tariff on importations of lead and zinc. Meanwhile, railroad freight rates, particularly upon bullion from western smelters to eastern points, remain at prohibitory levels, while many of the commodities which enter into mining development, particularly powder, still stand at unconscionable levels, as if suspended in aid.

"Comparison of this quarter's dividend returns with those of the same quarter in 1920 will tell the story in the most graphic manner and we there—

"For the balance of the year prognostications can be of little value. All depends upon the adjustment of freight rates and commodity cost, plus the direction of the metal markets. As things look now, the returns for the year will run far short of any realized in the past six years, with perhaps not more than \$3,000,000 from the Coeur d'Alenes and not more than \$1,000,000 from British Columbia, even if conditions improve. So far as Washington is concerned, there seems to be little probability of profit distribution.

"The mining industry of the Northwest is apparently in the syncline of depression and it will take time to correct the conditions which have caused the decline. The most reassuring feature of the whole situation is that the Northwest is in better shape than other parts of the country and that it may be expected to show quick improvement if the price of lead advances, or Congress should take prompt action upon the question of tariff. With that we must be content till the clouds roll by.

MR. HOWAT ARRESTED AGAIN

LABOR'S ATTITUDE toward laws and courts, as reflected by the actions of its leaders, is seen in the activities of President Howat of District No. 14, United Mine Workers of America. The *New York Times* takes occasion to point out the disregard for legal processes which Mr. Howat invariably manifests:

"The President of District 14, United Mine Workers of America, has been arrested again. There is no surer sign of Spring. Last year, Mr. Howat was arrested for ordering a strike against the tyranny of the Kansas Court of Industrial Relations. Year before last he was more successful in his defiance of the hated court, for the sheriff allowed him from the jail steps to make a speech, in which he denounced Kansas's 'skunk of a Governor.' Mr. Howat sometimes stays in jail as much as

a week when the union lawyers are slow in filing a bond. In that manner he is now free, although under sentence for contempt of court and charged with felony under the Industrial Court law. Mr. Howat's view of the law is that it does not apply to labor. When it was passed the legislature was thinking of the public which the mine workers were depriving of fuel in midwinter.

"Mr. Howat errs in thinking that 'this law is meant to enslave organized labor.' He even thinks that the law is 'only the beginning' of a movement designed to destroy unionism in the entire country and to chain workers to their jobs. It is said that there are a million or two of workers who would like to find jobs to be chained to. But in the present strike the enslaved workers have all the honors of war. Mr. Howat does not even recognize that there is a court, although the court takes notice that there is a strike."

IT PAYS TO BE A FARMER

FREE POWDER is being offered to the farmers. The *Wallace (Idaho) Miner* is glad of it and hopes that the gift will be of benefit not only to agriculturists, but to the food resources of the country also, but cannot resist the temptation to note that no one has yet suggested giving free powder to miners, who can certainly make as good use of it as anybody else. The *Wallace Miner* might also have added that the miners need help as badly as anybody else, for certainly, from a financial standpoint, the farmers have not suffered any more than they. We quote:

"An amendment to the agricultural appropriation bill passed by the last congress provided for the free distribution of twelve million, five hundred thousand pounds of explosives to the farmers of the country to be used in clearing stumps and stones from their land. It is stated that this powder is deteriorating and that it must be used in the near future if used at all. This will no doubt prove of great assistance to the farmers of the country, who, like the miners, have been forced to pay wartime prices for what is known as stumping powder, and the action of the government in giving them this surplus stock will not only be of immediate benefit, but will probably force the powder manufacturers to reduce the price. It is too bad that the mining industry can not get an advantage of this kind. The prices of explosives used in mining are practically the same today that they were during the war, possibly a little lower, but still almost double the pre-war prices."

SILVER ERA DAWNS IN ALASKA

ALASKA has had her golden era and her copper days, and now, according to Juneau mining men interviewed by the *San Francisco Bulletin*, is about to enter her silver age, when the white metal will take its place among the leading mineral products of the territory. Lead is also receiving unwonted attention. The article continues:

"From many parts of the northland come reports that the present market price of silver has induced many prospectors to search the hills and valleys for silver ledges, which, in the fever of the old rich gold placer days, were passed up. And where promising silver discoveries have been made capital has been obtained easily for their development.

"Gold and copper have not ceased to become leading Alaska productions, it is believed, but present conditions make it impossible to work for them on a large scale.

Operating costs are still too great for any extensive workings in the gold fields, and copper today is selling for less than the cost of production.

"So to silver, the 'white hope of the North,' miners are turning. The Kantishna district of Western Alaska and the Yukon valley district, near Ruby, are showing silver prospects and are being worked. An extensive galena showing has been uncovered in the Wild river district of the Koyukuk country. Prospectors in the Broad Pass country, near the government railroad, and in the Alaska peninsula have also found galena.

"Across the Canadian boundary, in the Yukon Territory, near Dawson, the old gold capital, mining interests are making extensive silver explorations at Mayo. Galena is being shipped regularly from Mayo."

GEOLOGICAL SURVEY NOTES

SIDNEY PAIGE and A. I. Jonas have returned from a field trip to Maryland and Pennsylvania.

K. K. KIMBALL has resumed co-operative mapping of Tennessee marbles.

T. WAYLAND VAUGHAN has returned from Port au Prince, where he has been inspecting geologic work in Haiti. W. P. Woodring and party left Haiti for this country April 1.

H. W. DAVIS has been in western Kentucky and southern Illinois, where he was occupied for three weeks in gathering fluor-spar statistics.

J. H. WILKE, W. S. Beames, Crawford Dickey, J. F. Woodward, and V. S. Seward have been assigned to field work in Mississippi.

H. R. KILMER, F. M. Schilling, E. E. Harris, and H. P. Kilby have gone to West Virginia to begin field work.

W. B. UPTON, Jr., having completed work assigned to him in Texas, has reported for office duty in Washington.

H. E. SIMMOS, S. E. Clement, and T. F. Murphy have been assigned to field work in Texas.

RALPH R. WOOLLEY, of Salt Lake City, reached Washington March 16 and will be employed for a few months in the Washington office completing a manuscript report on the water powers of the Great Salt Lake basin.

JACOB B. SPIEGEL, who had been engaged in stream-gaging work in Arizona, has returned to the Denver district.

ROGER C. RICE has been transferred from the position of district engineer in Kansas to a similar position in Arizona, with headquarters at Tucson. E. L. Williams succeeds Mr. Rice as district engineer in Kansas.

GEOLOGICAL SURVEY PUBLICATIONS

Coal in 1918; Part B, Distribution and Consumption; by C. E. Leshner, Geological Survey.

The Divide Silver District, Nevada; by Adolph Knopf, Geological Survey.

Character of Coal in the Thomas Bed Near Harrison, West Virginia; Marius E. Campbell, Geological Survey.

Geography, Geology and Mineral Resources of the Fort Hall Indian Reservation, Idaho; by G. R. Mansfield, with a chapter on water resources by W. B. Heroy, Geological Survey.

Coal in the Middle and Eastern Parts of San Juan County, New Mexico; by Clyde Max. Bauer and John B. Reeside, Geological Survey.

The Mogollon District, New Mexico; Henry G. Ferguson, Geological Survey.

SALT, BROMINE, AND CALCIUM
CHLORIDE IN 1919

AMERICA'S salt bill in 1919, the latest year for which statistics are available, amounted to \$27,074,694. This calculation includes only the salt which was produced in the United States, amounting to 6,882,902 short tons. There was a decrease of 4.9 percent in quantity and an increase of .5 percent in value as compared with 1918.

Fifteen states and territories produced salt in 1919, and there were 102 operating plants in the United States. The leading producers were: Michigan, 2,492,378 short tons; New York, 1,947,829; Ohio, 991,730; Kansas, 773,576; California, 200,115; Utah, 77,336; West Virginia, 18,599; Idaho, 39. The other states produced 381,300 tons.

The consumption of salt per capita was 116 pounds. Importations during the year were very small; exportations during the year amounted to 238,831,706 pounds, or 119,416 tons.

It is interesting to note that one of the uses of salt is found in the manufacture of poison gas. Chlorine, the main element of one of the most deadly of these gases, is made from salt by an electrolytic process. The salt is broken down by electrolysis and chlorine gas is driven off.

Bromine production during 1919 amounted to 1,854,971 pounds valued at \$1,234,969. This was an increase of 7.4 percent in quantity and 27.3 percent in value over that of 1918. The quantity produced in 1918 was itself an increase of 92.9 percent over that of

1917. About 94 percent of the 1919 output came from Michigan and the remainder from Ohio and West Virginia. Most of the output was marketed not as bromine, but as potassium and sodium bromide and other bromine salts.

The production of calcium-magnesium chloride in 1919 amounted to 26,123 short tons valued at \$321,596. As compared with 1918, there was a decrease of 1.9 percent in quantity and 36.1 percent in value. Calcium chloride is used mainly for the prevention of dust on roads and playgrounds, in brine for refrigerating plants, for fire protection, for the prevention of freezing, and as a drying agent.

NOME GOLD FIELDS

GOLD worth nearly \$80,000,000 has been produced in placer fields of Nome, discovered in 1898. Operations in this field were discussed fully in a recent paper entitled "Mining on Seward Peninsula Alaska" by George L. Harrington of the United States Geological Survey.

Much of the gold mined in the Nome region is taken out by the use of dredges. Twenty-two dredges in 1919 produced \$450,000 worth of gold, and open cut and deep mining during the same year produced gold which brought the total output of Seward Peninsula for the year up to \$1,360,000. About 20 ounces of platinum, and 56 tons of placer tin were also produced on the peninsula in 1919.

MAGNESITE IN 1920

PRODUCTION of magnesite in the United States in 1920 amounted to 303,767 short tons, valued at \$2,784,150, or 94 percent more than that of 1919. California and Washington furnished the entire output. The increase in California over 1919 was 63 percent and that of Washington 109 percent.

Most of the California output was calcine and used as plastic material. A small part of it, which was natural ferro-magnesite, was used as a refractory lining for steel furnaces. Practically the entire production of Washington was dead-burned into synthetic ferro-magnesite and used as a refractory lining for smelters and furnaces.

The Geological Survey recently made an announcement containing the statement that some of the California producers were considerably discouraged at the end of the year on account of the high cost of labor and supplies, high freight rates, and the competition of foreign material.

Imports of magnesite during the year, reported by the Bureau of Foreign and Domestic Commerce as calcined, not purified, totaled 43,154 long tons, valued at \$780,078.

Production for eight years in California and Washington follows:

Crude magnesite produced and sold or treated in the United States.

1913-1920. (Short tons)

Year	California	Washington
1913	9,362
1914	11,293
1915	30,499
1916	154,259	715
1917	211,663	105,175
1918	84,077	147,528
1919	50,020	106,206
1920	81,782	221,985

CONVENTION DATES

May 4, 5 and 6.—Fifth annual Spring convention of the Indiana Retail Coal Merchants' Association at Tabernacle Building, Indianapolis, Ind.

May 9-11.—Seventh annual convention of the American Association of Engineers.

May 12, 13 and 14.—Fourth annual convention of the National Retail Coal Merchants' Association at Richmond, Va.

May 15-16.—Sixth conference of secretaries and executives at the Baltimore Hotel, Kansas City, Mo.

May 16, 17 and 18.—Annual convention of the Colorado Retail Coal Dealers' Association at Fort Collins, Colo.

May 19-20.—Annual convention of the National Coal Association at the Waldorf Astoria Hotel, New York City.

May 24, 25 and 26.—Thirteenth annual meeting of the international Railway Fuel Association at the Hotel Sherman, Chicago.

June 7.—Annual convention of the American Wholesale Coal Association in Washington, D. C.

June 22, 23 and 24.—Annual convention of the Pennsylvania Retail Coal Merchants' Association at Harrisburg, Pa.

October 17 to October 22.—Twenty-fourth annual convention of the American Mining Congress at the Congress Hotel. National Exposition of Mines and Mining Machinery at the Coliseum.

TUNGSTEN IN 1918

PRODUCTION of tungsten in the United States in 1918, figures for which have just been announced by the Geological Survey, was equivalent to 5,061 short tons of concentrates, carrying 60 percent of tungsten trioxide. The value was \$7,049,300, an average of \$23.22 a unit. This production compared with 6,144 tons in 1917 and 5,923 tons in 1916. Production by states during the last three years reported was as follows:

Concentrated tungsten ores (carrying 60 percent of tungsten trioxide) produced in the United States, 1916-1918 by States, in short tons.

State	1916	1917	1918
Alaska	47	32	14
Arizona	218	150	213
California	2,171	2,781	1,791
Colorado	2,401	2,707	1,910
Idaho	101	2
Nevada	689	143	898
New Mexico	16	(a)	4
South Dakota	239	270	201
Other States ^b	41	59	30
	5,923	6,144	5,061

^a Less than 1 ton.

^b 1916: Connecticut, Missouri, Montana, Oregon, Utah, and Washington; 1917: Montana, Oregon, Utah and Washington; 1918: Montana, Utah and Washington.

CANADA'S MINERAL PRODUCTION
LARGEST ON RECORD

THE HIGH POINT in value of mineral production was reached in Canada last year, the total being \$217,775,080, or \$6,473,183 greater than that of 1918, the previous maximum figure. An announcement by the Canadian Bureau of Information based on preliminary calculations of the Canadian Department of Mines shows that production in every province except Yukon was greater than in 1919.

"Canada now occupies an almost unique position in being perhaps the only gold producing country which has not shown a serious falling off in the production of this metal," the announcement says. Gold production really increased during the last two years, although the increment was small.

Production of some of the leading metals during the last two years follows:

	1919	1920
Copper, lbs.	75,053,581	81,155,360
Gold, ounces	766,764	766,912
Lead, lbs.	43,827,699	33,985,974
Nickel, lbs.	44,544,883	61,136,493
Silver, ounces	16,020,657	12,793,541
Zinc, lbs.	32,194,707	40,166,200
Pig iron, tons	818,447	973,498
Coal, tons	13,681,218	16,623,598
Asbestos, tons	157,572	157,904

The metallic production of 1920 was \$77,236,370, as compared with \$114,549,152 in 1918 and \$73,262,793 in 1919. The value of non-metallic production, including clay and quarry products, was \$140,538,710, as compared with \$96,752,745 in 1918 and \$102,423,507 in 1919.

Mineral production by provinces during the last two years follows:

	1919	1920
Nova Scotia	\$23,445,215	\$30,187,533
New Brunswick	1,770,945	3,225,261
Quebec	21,267,947	37,722,502
Ontario	67,917,998	78,749,178
Manitoba	2,868,378	3,900,207
Saskatchewan	1,521,964	1,711,580
Alberta	21,067,582	33,721,898
British Columbia	34,865,427	38,044,915
Yukon	1,940,934	1,512,006



NATIONAL LEGISLATION

THE SIXTY - SEVENTH CONGRESS of the United States opened April 11. Intense interest has centered around this special session, which has before it such a gigantic task. It has not kept the country in suspense as to the character of legislation which it proposes to enact and a multitude of bills have been introduced. Over two thousand bills were introduced the first day of the session and up to this writing, April 21, there have been introduced 5857 bills, 4827 in the House of Representatives and 1030 in the Senate.

Special interest centers around the revision of the tariff, so far as mining is concerned, there being twenty-five minerals asking for protection, which are as follows: Antimony, Arsenic, Asbestos, Barytes, Bauxite, Chromite, Feldspar, Fluorspar, Graphite, Gypsum, Kaolin, Lead, Lime, Manganese, Magnesite, Marble, Mica, Molybdenum, Monazite and Thorium, Pyrites, Pumice, Potash, Quick-silver, Tungsten, Talc, Zinc.

Of secondary importance, only on the calendar, and not in the interest of the industry, is revenue legislation. Bills already have been introduced for the regulations of the coal industry and for regulation of grain. Congress itself has given very little consideration to any matters which affect the mining industry with the exception of the introduction of bills and the consideration by the various committees of proposed legislation, such as that given to mineral tariffs by the Ways and Means Committee, its time being largely consumed in the discussion of the ratification of the Colombian Treaty and the emergency tariff, which latter bill does not include metals.

In addition to the enormous questions of tariff and taxation it must dispose of speedily the large appropriation bills which failed of passage in the Sixty-sixth Congress. The following bills of interest to the industry have been introduced:

COAL

S. 824. Introduced by Mr. Frelinghuysen; referred to the Committee on Interstate Com-

merce. (*Federal Coal Commissioner.*) The bill provides that the President shall appoint a Federal Coal Commissioner to hold office for a term of five years and receive an annual salary of \$10,000. He shall not engage in any other business, vocation, etc. In case of a vacancy in the office of commissioner the President shall appoint a person to serve as commissioner for the remainder of the unexpired term. The principal office shall be in the District of Columbia and the commissioner shall investigate the organization, management and practices of dealers and operators,

sable to determine the most efficient means for such storage. He shall investigate the desirability and practicability of prescribing statutory standards for various kinds and grades of coal, and shall submit a report thereon to Congress before April 1, 1921. He shall also investigate the desirability and practicability of a statutory zoning system defining the distance from the mine within which coal therefrom may be transported in commerce and shall submit a report to Congress before April 1, 1921. He shall make a report to Congress on or before the first day of De-

cember in each year setting forth the work and activities of his office for the past year. The Interstate Commerce Commission and the Federal Trade Commission are authorized to co-operate with the commissioner who shall at all times, either himself or through his duly authorized agents, have access to and the right to examine the mines, offices or other place of business of any operator or dealer and shall have the right to copy any books, records, papers, correspondence, or any entries therein. Any operator who shall neglect or refuse to permit the commissioner to make this examination shall be guilty of a misdemeanor and shall on conviction be punished by a fine of not more than \$1,000 or by imprisonment for not more than six months, or both. The commissioner is empowered to require operators and dealers to file with him in such form as he may prescribe, annual and special reports

or answers in writing to specific questions, furnishing to the commissioner such information as he may require as to the organization, practices, management, relation to other persons, costs, prices and profits of the operator, such reports and answers to be made under oath. A fine of \$1,000, imprisonment for not more than six months or both is imposed for violation of this section. The sum of \$50,000 is appropriated.

H. R. 20. Introduced by Mr. Newton; referred to the Committee on Interstate and

IMPORTANT BILLS BEFORE CONGRESS

COAL:

- S. 324 Federal Coal Commissioner
- H. R. 20 Federal Control Act
- S. 41 Seasonable Rates
- H. R. 3720 Government Purchase of Coal
- H. Res. 41 Report on Coal Resources

TARIFF:

- H. R. 2255 Lead
- H. R. 2256 Barytes
- H. R. 2390 Granite
- H. R. 2468 Tungsten

REVENUE:

- H. R. 215 Revenue Act of 1921
- S. 202 Sales Tax
- H. R. 236 Repeal Excess Profits
- H. R. 229 Net Losses
- H. R. 2368 Imposing Special Taxes
- H. R. 2226 General Sales Tax
- H. R. 29 Exemptions
- H. R. 256 Increase Income Tax

WAR MINERALS:

- S. 843
- H. R. 3735 Liberalizing War Minerals Relief Act
- H. R. 2450

OIL SHALE:

- H. R. 2348 Special Investigation

costs and profits in connection with the mining, sale, and distribution of coal, the terms contained in leases of coal mines, the prices demanded or received for coal, the distribution, storage, and sale of coal, and the methods and processes employed therein; the consumption of coal, and the transportation of coal in commerce, including the distribution of coal cars. He shall also investigate the wages, working conditions, terms of employment, and the living expenses of miners. He shall investigate methods and processes for the storage of coal and conduct such experiments and researches as he may find advi-

Foreign Commerce. (*Federal Coal Control Act.*) The bill provides that the Federal Trade Commission is authorized and directed to currently require, secure, and compile reports respecting ownership, production, distribution, stocks, investments, costs, sales, margins, and profits in the coal industry and trade from persons or corporations interested in the production, etc., of coal, requiring such separation of the information as to enable calculations to be made to show separately costs and profits as to the following classes of investment and business: The investment actually used currently in the business of producing, selling, or distributing coal; investment in land or other items, including expenses incidental thereto held for future use or development; and other investments not directly used in the production, and may investigate from time to time the organization, etc., of such persons and corporations, including also any corporations acting as a holding company for or guarantor of the stock of any such corporation, and including also any partnership acting in a capacity analogous to that of such a holding company, and also the organization, etc., of owners of coal lands and report its findings and recommendations to Congress. They also shall investigate and report as to all financial interrelations, including contracts between owners, operators, or dealers, or other persons or corporations, in so far as may be necessary to determine the full profits of owners, etc.; the existence of any combination or relationship which may tend to lessen competition or to create a monopoly in the coal industry, however, persons or corporations interested as consumers only in the storage of coal, the powers granted under this section shall extend only to reports and investigations covering the quantities of coal consumed by, the stocks of coal held by, and the kind of business engaged in. These reports are to be filed with the commission over regular monthly periods and the statements of investments and profits shall be required and compiled at least annually. The bill also provides that the Interstate Commerce Commission shall require and secure reports, from railroads on the ratings of mines for the purpose of distribution of coal cars and the percentage of coal-car rated requirements furnished, the loading, movement, reconsignment, and unloading of coal or coal cars, and other information relevant thereto. The Director of the Geological Survey shall continue the series of reports and bulletins concerning the coal industry heretofore published by him, that is, the annual reports on coal production, annual report on the movement of coal, etc., and shall from time to time publish special reports on subjects specified as he deems of value to Congress. He may call upon the Federal Trade Commission and the Interstate Commerce Commission to obtain for him such reports from owners, operators, dealers, consumers, and carriers by rail or water that he may deem necessary for the publication of these reports. He may also secure voluntary reports in so far as practicable on such subjects as the Federal Trade Commission and the Interstate Commerce

Commission may mutually agree with the director. Section 7 of the bill gives the Federal Trade Commission the authority to have access to, for the purpose of examination and the right to copy any documentary evidence reported or being investigated. Upon request of the commission the district courts of the United States shall have jurisdiction to issue writs of mandamus commanding any operator or dealer to comply with the provisions of this Act. If any person shall refuse or neglect to testify or to produce documentary evidence in conjunction with the collecting of this data, he shall be fined and imprisoned for one year or both. If any officer or employe of the commission makes public any information obtained by him, without its authority, unless directed by a court, he shall be guilty of a misdemeanor and subject to a fine of not exceeding \$5,000 or imprisonment for one year or both. Section 12 of the bill authorizes the Bureau of Mines to investigate from time to time methods and processes for storage and combustion of coal and the transmission of power from fuel centers, and to conduct such experiments and research as it may find advisable. They shall also investigate the desirability of prescribing inspections for various kinds and grades of coal. The Federal Trade Commission, the Interstate Commerce Commission and the Geological Survey shall co-operate and keep their analyses and compilations currently revised and available for immediate reference to be placed at the disposal of any private or public board engaged in the arbitration, or settlement of any labor dispute arising in any mine or group of mines from which coal is shipped. The Federal Trade Commission and the Interstate Commerce Commission have the authority to make and enforce all rules and regulations necessary for carrying out the provisions of this Act. There is appropriated the sum of \$10,000 each to the Director of the Geological Survey and the Interstate Commerce Commission and \$25,000 to the Federal Trade Commission to defray the expenses.

S. 41. Introduced by Mr. Frelinghuysen; referred to the Committee on Interstate Commerce. (*Seasonable rates for the transportation of coal.*) Thirty days after the enactment of this amendment to the Interstate Commerce Act no carrier shall demand, collect, receive, or enforce, for the carriage of coal any joint rate which is greater or less than—

5 cents per ton more than the schedule base rate then in effect therefor for shipments made during August.

15 cents per ton more than such rate for shipments made during September, 25 cents per ton more than such rate for shipments made during October, November, and December, or 10 cents per ton more than such rate for shipments made during January, or which is greater or less than 10 cents per ton less than the schedule base rate then in effect therefor for shipments made during February,

25 cents per ton less than such rate for

shipments made during March, April, and May,

15 cents per ton less than such rate for shipments made during June, or

5 cents per ton less than such rate for shipments made during July.

The Interstate Commerce Commission upon complaint is authorized to investigate and determine and prescribe what is a just, reasonable or proportionate joint rate.

H. R. 3720. Introduced by Mr. Rhodes; referred to the Committee on Mines and Mining. (*Government purchase of coal.*) The bill authorizes the Director of the United States Bureau of Mines to select and contract for all coal and other fuel required by any branch of the federal service. It will be the duty of the Director of the Bureau to make analyses and tests of coal and other fuels, and to make such investigations of fuel-burning equipment of the different branches of the federal service as will result in the greatest fuel economy. Each branch of the service shall furnish to the Director such information relating to its fuel-burning equipment, fuel consumption, and fuel use as may be requested by him. He is also authorized to contract for the purchase for the different branches of the federal service in advance of the availability of appropriations for the payment thereof but the contract shall not exceed the necessities of the current year. Each branch of the service shall pay in the United States Treasury an amount to be fixed by him, but in no case to exceed 5 cents per ton, for each ton of coal purchased, analyzed or tested, or 1 mill per barrel of fuel oil purchased or 1 mill per gallon of gasoline or kerosene purchased. The bill appropriates the sum of \$250,000 for the enforcement of the act in any one fiscal year.

H. Res. 41. Introduced by Mr. Lambert; referred to the Committee on Interstate and Foreign Commerce. (*Report on coal.*) The resolution authorizes the Federal Trade Commission to make a survey of all coal-bearing lands in the United States and its possessions and to ascertain the present value of coal lands and mines, including the machinery and other equipment and make a report to the House of Representatives before December 1, 1921. The resolution appropriates \$50,000

TARIFF

H. R. 2255. Introduced by Mr. Rhodes; referred to the Committee on Ways and Means. (*Lead.*) The bill imposes a tariff on lead-bearing ores, lead, and lead products, imported. Lead-bearing ores to bear a tariff of 1½ cents per pound; lead dross, bullion, pigs, bars, etc., 2 cents per pound and all other lead products or compounds 40 percent ad valorem.

H. R. 2256. Introduced by Mr. Rhodes; referred to the Committee on Ways and

Means. (*Barytes*.) This bill imposes a tariff on crude barytes ore of $\frac{3}{4}$ of 1 cent per pound; on ground barytes or barium sulphate, a duty of $1\frac{1}{4}$ cents per pound; on sodium sulphide crystals, a duty of $1\frac{1}{4}$ cents per pound; on barium sulphide a duty of $1\frac{1}{2}$ cents per pound; on barium carbonate, 2 cents per pound; on precipitated barium sulphate, 2 cents per pound; on barium hydrate, $2\frac{1}{2}$ cents per pound; on barium chloride, $2\frac{1}{2}$ cents per pound; on all lithopone, $2\frac{1}{2}$ cents per pound, on all concentrated sodium sulphide, $2\frac{1}{2}$ cents per pound; on barium nitrate, 5 cents per pound; on barium peroxide, 8 cents per pound; and on each and every other barium compound and barium chemical, a duty of 50 per cent ad valorem.

H. R. 2390. Introduced by Mr. Wason; referred to the Committee on Ways and Means. (*Granite, freestone, etc.*) A tariff of 75 percent ad valorem is imposed upon all importations of granite, freestone, sandstone, limestone and all other monumental or building stone, except marble, breccia and onyx. Upon unmanufactured or not dressed, hewn, or polished a tariff of 15 cents per cubic foot is imposed. The bill expressly repeals paragraph 99 of Schedule B of section 1 of the act to reduce tariff duties, approved October 3, 1913.

H. R. 2468. Introduced by Mr. Arentz; referred to the Committee on Ways and Means. (*Tungsten*.) The bill imposes a duty on tungsten-bearing ores and concentrates of \$10 per unit of tungstic trioxide contained therein. A duty of nine-tenth of 1 cent per pound is imposed upon metallic tungsten, tungsten powder, ferro-tungsten, ferre-tungsten powder, scrap steel containing tungsten fit only to be manufactured, commercial tungstic acid, calcium tungstate, sodium tungstate, and all other salts of tungsten and other manufactured materials containing tungsten (except highspeed tungsten steel, and all alloy steels containing tungsten) containing a percentage or fraction thereof of tungsten. A duty of 35 percent ad valorem is imposed upon highspeed tungsten steel and all alloy steels containing tungsten. The provisions of the act shall not be deemed to repeal any tariff now existing upon any substance or materials mentioned herein.

REVENUE

H. R. 215. Introduced by Mr. Longworth; referred to the Committee of Ways and Means. (To reduce taxes, to repeal war profits and excess profits tax, and simplify the Revenue Act.) The bill is termed the *Revenue Act of 1921*. It expressly repeals Section 200 of "personal service corporation" of the Act of 1918. Section 202 is amended to provide that in the case of property acquired by gift after December 31, 1920, it is taxable, the same basis that it would have in the hands of the donor or the last preceding owner by whom it was not acquired by gift.

In the case of the sale or exchange of property acquired by gift after December 31, 1920, the entire amount received therefor shall be included in the gross income of the donee unless the donee submits with his return evidence satisfactory to the commissioner showing the basis in the hands of the last preceding owner. Section 202 is also amended to provide that when property is exchanged for other property, it shall be treated for the purpose of determining gain or loss as the equivalent of cash to the amount of its fair market value except when the market value of the property in the opinion of the commissioner can not be satisfactorily determined or when a person exchanges property for not less than 95 percent of the stock of a corporation organized to take over such property or when property is exchanged between corporations affiliated within the meaning of section 240; or when, in connection with the reorganization of a corporation, a corporation exchanges property with another corporation involved in such reorganization, or a person receives in place of stock or securities owned by him new stock or securities; or when real estate (including standing timber) is exchanged for real estate and it is shown to the satisfaction of the commissioner that the exchange was consummated for the purpose of consolidating or blocking out holdings of timber and not for purposes of profit other than the economies of management. A new subdivision is added at the end of Section 202 to read as follows: In the case of stock dividends paid after February 28, 1913, the cost to the taxpayer of each share of old and new stock shall be the cost of the old shares of stock divided by the total number of same. It provides that in cases in which the old and new shares of stock differ materially in character, the cost of the old shares shall be apportioned between the old and new shares as nearly as may be in proportion to the respective values of each at the time the new shares of stock were acquired. Section 205 is amended by adding a new subdivision which reads as follows: If a taxpayer makes a return for a fiscal year beginning in 1920 and ending in 1921, the tax under this title for such taxable year shall be the sum of the same proportion of a tax for the entire period, as in effect prior to the passage of the Revenue Act of 1921 for the calendar year 1920, which the portion of such period falling within the calendar year 1920 is of the entire period; and the same proportion of a tax for the entire period at the rates specified for the calendar year 1921 which the portion of such period falling within the calendar year 1921 is of the entire period.

Compensation received in any taxable year beginning after December 31, 1920, for personal service rendered by the taxpayer during a period of more than three years and gain derived in any such year from the sale of capital assets acquired more than three years prior to the date of sale shall be deemed to be extraordinary income and this income, less losses of the same class, shall be deemed to be extraordinary net income. The bill defines the term "capital assets" as property held by the taxpayer for consumption or use, but

does not include any property, whether real, personal, or mixed, held by a dealer for sale. If the extraordinary income of a taxpayer amounts to more than 20 per cent of his entire gross income for the taxable year, it may be apportioned ratably to the years or parts thereof during which such service was rendered or such assets held. An amount thus ratably apportioned to any year shall be added to the other income of the taxpayer for such year and the tax redetermined upon the corrected amount at the rates applicable to such year, notwithstanding the provisions of section 206 or any other provision of the Act. A return of such extraordinary income shall be made at the time prescribed in subdivision A of section 227. If the additional taxes found upon such redetermination to be due for prior years are paid in the same proportionate amounts and at the same time installment dates fixed for the payment of taxes due upon income for the year in which such extraordinary income was received, no penalty or interest shall be added with respect to the time which has elapsed between such prior years and the date or dates of payment.

Section 211 is amended by adding at the end thereof a new subdivision as follows: For the calendar year 1921, and each calendar year thereafter, the rate upon the amount by which the net income exceeds \$82,000 shall be 40 percent instead of the rates specified in subdivision A in respect thereto. Subdivision A of section 216 is amended by providing that the amount received as dividends from a corporation which is taxable under this title upon its net income. Section 218 is repealed. Section 220 is amended to provide that if any corporation is formed for the purpose of preventing the imposition of the surtax upon its stockholders through the medium of permitting its gain and profits to accumulate instead of being divided or distributed it shall not be subject to the tax imposed by section 230, but the stockholders thereof shall be subject to taxation in the same manner as the members of partnerships. The amounts distributed by such a corporation during its taxable year shall be accounted for by the distributees; and any portion of the net income remaining undistributed shall be accounted for by the stockholders except that the taxes imposed by title 3 shall be deducted from the net income of the corporation before the computation of the proportionate share of each stockholder. The fact that any corporation is a mere holding company, or that the gains are permitted to accumulate beyond the reasonable needs of the business, shall be prima facie evidence of a purpose to escape the surtax. Upon request by the commissioner or any collector, every corporation must forward to him a correct statement of the gains and profits and the names and addresses of the individuals or shareholders and the amounts that would be payable to each. It also provides that section 230 be amended by adding at the end thereof a new subdivision as follows: In addition to all other taxes imposed by this Act, there shall be levied, collected, and paid for the taxable year 1921 and each taxable year thereafter, upon the

net income of every corporation, a surtax equal to 5 percent of the amount of the net income. If a corporation makes an income-tax return for a fiscal year beginning in 1920 and ending in 1921, the surtax for the portion of the year falling within the calendar year 1921 shall be an amount equivalent to the same proportion of the tax for the entire period computed under this title which the portion of such period falling within the calendar year 1921 is of the entire period. Subdivision 14 of section 231 is repealed. Subdivision A of Section 230 is amended to allow the following credits: The amount received as interest upon obligations of the United States and bonds issued by the War Finance Corporation, which is included in gross income under section 233; and the amount of any taxes imposed by title 3 for the same taxable year, provided that in the case of a corporation which makes return for a fiscal year beginning in 1917 and ending in 1918, in computing the tax as provided in subdivision A of Section 205, the tax computed for the entire period under title 2 of the Revenue Act of 1917 shall be credited against the net income computed for the entire period under title 1 of the Revenue Act of 1916, as amended by the Revenue Act of 1917, and under title 1 of the Revenue Act of 1917, and the tax computed for the entire period under title 3 of this Act at the rates prescribed for the calendar year 1918 shall be credited against the net income computed for the entire period under this title. Section 239 of such Act is amended by striking out of the first paragraph the words "and every personal-service corporation."

Subdivision D of Section 250 is amended by providing that the amount of tax due under any return made under this or prior acts shall be determined and assessed by the commissioner within five years after the return was made, except in the case of false or fraudulent returns with intent to evade the tax, or with the consent of both the commissioner and the taxpayer, or as otherwise provided in section 207, of subdivision A of section 214, or in paragraph 8 of subdivision A of section 234, or in the final settlement of losses and other deductions tentatively allowed by the commissioner pending a determination of the exact amount deductible; and no suit or proceeding for the collection of any tax shall be begun after the expiration of five years after the date when the return is made. In the case of such false or fraudulent returns, the amount of the tax due may be determined at any time after the return is filed, and the tax may be collected at any time after it becomes due. The bill specifically exempts 4 percent and 4½ percent Liberty Bonds from the graduated additional income taxes, commonly known as surtaxes, and excess-profits and war-profits taxes. These exemptions are in addition to section 7 of the Second Liberty Bond Act and in addition to exemptions provided in subdivision 3 of Section 1 of the supplement to the Second Liberty Bond Act in respect to bonds issued upon conversion of 3½ percent bonds, but shall be in lieu of the exemptions provided and free from the condi-

tions and limitations imposed in subdivision 1 and 2 of section 1 of the Supplement to Second Liberty Bond Act and in section 2 of the Victory Liberty Loan Act. After January 1, 1921, title 3 of the Revenue Act of 1918 is repealed, except that it shall remain in force for the assessment and collection of all taxes which have accrued thereunder. If a corporation makes an income-tax return for a fiscal year beginning in 1920 and ending in 1921, the war-profits and excess-profits tax for the portion of the year falling within the calendar year 1920 shall be an amount equivalent to the same proportion of the tax for the entire period computed under title 3 of the Revenue Act of 1918. After July 1, 1921, section 630 and subdivisions a, c, and d of section 500 of the Revenue Act of 1918 are repealed, except that they shall stay in force for the assessment and collection of all taxes which have accrued thereunder.

S. 202. Introduced by Mr. Smoot; referred to the Committee on Finance. (*Sales Tax.*) The bill provides that in addition to all other taxes there shall be imposed a tax equivalent to one percent of the price for which all goods, wares or merchandise are sold or leased after July 1, 1921, the tax to be paid by the vendor or lessor. It does not, however, apply to sales and leases made during any year in which the total price for the taxable sales and leases does not exceed \$6,000. The taxpayer is entitled to an annual exemption of \$6,000 under the provisions of the Act. In any case where the full amount of exemption is not claimed in computing the tax due for the first quarter, the part not so claimed shall be deducted in computing the tax of the second quarter or succeeding quarters. The first quarter is defined as being July, August, and September; the second October, November, and December; the third January, February, and March and the fourth, April, May and June. The taxes imposed do not apply to sales or leases made by the United States Government, any foreign government, any state or territory, or political subdivision thereof or the District of Columbia, any mutual ditch or irrigation company, any hospital, or Army and Navy commissaries and canteens; or any corporation organized and operated exclusively for religious, charitable, scientific, or educational purposes, no part of the net earnings of which inures to the benefit of any private stockholder or individual. The taxes imposed by the bill do not apply to sales or leases or articles taxable under Title VI of VII or paragraphs 1, 2, 3, 12, and 20 of section 900 of the Revenue Act of 1918. With the approval of the Secretary the tax does not apply to articles sold or leased for export. In computing the taxes imposed by the bill no credit is allowed for any tax reimbursed or paid in any manner to any person in connection with any previous transaction in respect to which a tax is imposed by law. If the tax is not paid promptly when due there is added as a part of the tax a penalty of five percent, together with interest at the rate of one percent for each month overdue. The bill expressly repeals,

after July 1, 1921, sections 628, 629, 630, 902 904, 905, 906, 907, and 900, except paragraphs 1, 2, 3, 12, and 20 of the Revenue Bill.

H. R. 236. Introduced by Mr. Bacharach; referred to the Committee on Ways and Means. (To reduce taxes and repeal war profits, excess-profits and certain other taxes.) (*Excess Profits.*) The bill provides that in computing the income tax in the case of a citizen or resident of the United States the rate upon the first \$4,000 in excess of the credits provided in section 216 of the Revenue Act of 1918 shall be two percent. It also provides that the surtax shall not apply to net incomes below \$7,000 per annum, the highest rate not to exceed 40 percent on amounts by which the net income does not exceed \$90,000 per annum. A tax of 10 percent is levied for each taxable year upon the net income of every corporation and the credits allowed in section 236 of the Revenue Bill are repealed. The bill provides for the striking out of all of Title III of the Revenue Bill. Section 500 of the Revenue Act is amended by striking out the freight and express transportation tax and tax on insurance. The bill expressly provides for the striking out of section 630 of Title VI, all of Title VIII, section 904 and subdivision (2) of section 907 of Title IX and subdivisions 9 and 11 of section 1001 and section 1003 of Title X. It provides, in addition to all other taxes, the levying of a tax equivalent to 1 percent of the amount received upon the sale or transfer of tangible personal property, mechanical or electrical energy. It provides for a tax upon food, drink, lodgings, or the use or enjoyment of services, privileges or facilities, granted by persons operating or conducting an inn, tavern, hotel, restaurant, cafe, eating house, garage, etc., the tax to be paid by the person receiving such amount. The taxes imposed by this section shall not apply to the first \$24,000 of the otherwise taxable amounts received, prorated monthly. In addition to all other taxes the bill provides for a tax of 10 percent upon the undistributed earnings of all corporations.

H. R. 229. Introduced by Mr. Burroughs; referred to the Committee on Ways and Means. This bill amends section 204 (b) of the Revenue Bill by providing that if upon satisfactory evidence it appears that any taxpayer has sustained a net loss, such loss may be deducted from the net income of the taxpayer for the preceding taxable year; and the taxes imposed by this title and Title III for such preceding taxable year shall be redetermined accordingly. Any amount found to be due the taxpayer upon the basis of such redetermination shall be refunded. In case the net loss is in excess of the net income for the preceding taxable year under regulations prescribed by the commissioner with the approval of the Secretary it may be allowed as a deduction in computing the net income for the succeeding taxable year. Section 214 of the Revenue Bill is amended to provide that at the time of filing return for any taxable year a taxpayer may file a claim in abatement

based on the fact that he has sustained a substantial loss. In such case payment of the amount of the tax covered by such claim shall not be required until the claim is decided, but the taxpayer shall accompany his claim with a bond in double the amount of the tax covered by the claim. If any part of the claim is disallowed, the remainder of the tax due shall, on notice and demand by the collector, be paid by the taxpayer with interest at the rate of 1 percent per month from the time the tax would have been due had no such claim been filed.

H. R. 2368. Introduced by Mr. Vaile; referred to the Committee on Ways and Means. This bill amends section 1001 of the Revenue Act by providing that on and after January 1, 1919, there shall be levied, collected, and paid annually the following special taxes: brokers shall pay \$50; if he is a member of a stock exchange, produce exchange, board of trade he shall pay an additional amount of \$100 or \$150 according to the amount he has paid for his seat on the exchange. Pawnbrokers shall pay \$100, ship brokers \$50, customhouse brokers \$50. Proprietors of theatres, museums, concert halls, etc., having a capacity of not more than 250 shall pay \$50, the scale rising slightly until reaching the capacity of 800 when they shall pay a tax of \$200. Various taxes are imposed upon proprietors of circuses, public exhibitions or shows, bowling alleys and billiard rooms, shooting galleries, riding academies, persons carrying on the business of operating or renting passenger automobiles, persons carrying on the business of a brewer, distiller, liquor dealer, etc. The bill very carefully defines what constitutes each of the titles.

H. R. 2226. Introduced by Mr. Mott; referred to the Committee on Ways and Means. (Amending the Revenue Act and establishing a general sales tax.) This bill repeals the war profits and excess profits tax, the tax on non-alcoholic beverages, etc., and provides for a tax on tangible property, patents, trademarks, copyrights, good will, franchises, etc., bonds, debentures, certificates indebtedness, etc., shares of certificates of stock, etc., of one percent of the price for which sold. A tax of one percent of the amount received is imposed upon the loaning of money or the discounting of commercial paper, etc. The bill expressly provides that the act does not apply to sales made or amounts received during any month in which the taxable amounts received do not exceed \$200.00.

H. R. 29. Introduced by Mr. Gould; referred to the Committee on Ways and Means. (Amending the Revenue Act.) The bill provides that paragraph (11) of subdivision (a) of section 214 of the Revenue Act of 1918, approved February 24, 1919, be amended to read as follows: Contributions or gifts made within the taxable year to corporations organized and operated exclusively for religious, charitable, scientific, educational, patriotic, or memorial purposes, or for the prevention of cruelty to children or

animals, no part of the net earnings of which inures to the benefit of any private stockholder or individual, or to the special fund for vocational rehabilitation authorized by section 7 of the Vocational Rehabilitation Act, to an amount not in excess of 15 percent of the taxpayer's net income as computed without the benefit of this paragraph. Such contributions or gifts shall be allowable as deductions only if verified under rules and regulations prescribed by the commissioner, with the approval of the Secretary. In case of a non-resident alien individual this deduction shall be allowed only as to contributions or gifts made to domestic corporations, or to such vocational rehabilitation fund. This act shall take effect as of January 1, 1920.

H. R. 256. Introduced by Mr. Griffin; referred to the Committee on Ways and Means. The bill provides that section 211 (a) of the Revenue Act, approved February 24, 1919, be amended to increase the surtax upon individual incomes of \$100,000 and upward, as follows:

55 percent of net income exceeding \$100,000 and not over \$150,000.

60 percent of net income exceeding \$150,000 and not over \$200,000.

70 percent of net income exceeding \$200,000 and not over \$300,000.

80 percent of net income exceeding \$300,000 and not over \$400,000.

90 percent of net income exceeding \$400,000 and not over \$500,000.

100 percent of net income exceeding \$500,000.

Section 2 amends the Revenue Act, approved February 24, 1919, by adding a new section, following section 301B which reads as follows: In lieu of the tax imposed by Title III of the Act, but in addition to the other taxes imposed there shall be levied, collected, and paid for the taxable year 1920 and for each taxable year thereafter upon the net income of every corporation a surtax to be computed as follows: After allowing the exemption for in section 312 of the Act, namely, \$3,000, to domestic corporations only, plus an amount equal to 8 percent of the invested capital for the taxable year, the net income of all corporations shall be subject to the same surtax as the incomes of individuals, as provided in section 211A of the Act as herein amended. All acts and parts of acts inconsistent with the provisions of this Act are repealed.

WAR MINERALS

S. 843. Introduced by Mr. Shortridge; referred to the Committee on Mines and Mining. The bill amends section 5 of the Act approved March 2, 1919, entitled "An Act to provide relief in cases of contracts connected with the prosecution of the war and for other purposes" by adding to the first paragraph of section 5 the following stipulation: All claimants who, in response to any personal, written, or published request, demand, solicitation, or appeal from

any of the Government agencies mentioned in the Act, in good faith expended money in producing or preparing to produce any of the ores or minerals named therein and have heretofore filed their claims within the time and in the manner prescribed shall be reimbursed such net losses as they may have been found to have incurred and are in justice and equity entitled to from the appropriation in the Act, and that the unexpended portion thereof be continued available for the purpose named above until all claims shall be finally settled or disposed of.

H. R. 3735. Introduced by Mr. Hayden; referred to the Committee on Mines and Mining. The bill provides that all claimants who, in response to any personal, written, or published request, demand, solicitation, or appeal from any of the Government agencies mentioned in section 5 of the Act approved March 2, 1919, entitled, "An Act to provide relief in cases of contracts connected with the prosecution of the war, and for other purposes," and who in good faith expended money in producing or preparing to produce manganese, chrome, pyrites, or tungsten, and have heretofore filed their claims within the time and in the manner prescribed, shall be paid such net losses as they have incurred and are in justice and equity entitled as may be determined by the Secretary of the Interior, and the unexpended balance of the appropriation made shall remain available until all such claims shall be finally settled or disposed of.

H. R. 2450. Introduced by Mr. Sinnott; referred to the Committee on Mines and Mining. The bill provides that section 5 of the Act approved March 2, 1919, entitled "An Act to provide relief in cases of contracts connected with the prosecution of the war, and for other purpose," be amended to read as follows: "That all claimants who in response to any personal, written, or published request, demand, solicitation, or appeal from any of the Government agencies mentioned in said Act in good faith expended money in producing or preparing to produce any of the ores or minerals named therein and heretofore filed their claims within the time and in the manner prescribed by said Act, shall be reimbursed such net losses as they may have been found to have incurred and are in justice and equity entitled to from the appropriation in said Act, and that the unexpended portion of the appropriation carried in said Act be continued available for the purposes named above until all claims in said Act shall be finally settled or disposed of."

LABOR

H. R. 110. Introduced by Mr. Mason; referred to the Committee on Ways and Means. (Amending the revenue laws of the United States.) The bill provides that hereafter for all persons employed in any mine or quarry in the United States under the age of sixteen years the employer shall pay to the United States \$2 per day for each day for each person so employed. For all persons

employed in any mill, cannery, work shop, factory, or manufacturing establishment situated in the United States, under the age of fourteen years, the employer shall pay to the United States of America \$2 per day for each person so employed.

S. Res. 52. Introduced by Mr. Hayden; referred to the Committee on Education and Labor. The resolution reads as follows: "Whereas a temporary decrease in industrial activity has deprived many persons of employment; and it is regarded as sound government policy to prosecute public works during periods when labor and material are not fully absorbed by private industry and are therefore in plentiful supply; and Congress has made appropriations now available for the execution of certain public works; and the immediate prosecution of such public works will give employment to large numbers of persons now seeking employment not only directly on the public works but indirectly upon the manufacture of the materials required. It is therefore resolved that the President of the United States be requested, if not incompatible with the public interests, to take measures that the public works of the United States for which appropriations are now available may be expedited and actively prosecuted during the present period of diminished industrial activity.

S. 846. Introduced by Mr. Kenyon; referred to the Committee on Education and Labor. The bill authorizes the Secretary of the Interior through the Bureau of Education to co-operate with the several states in the education of illiterates or other persons unable to speak, read, or write the English language by appropriating \$5,000,000 for the year ending June 30, 1920, and annually thereafter until the end of the fiscal year ending June 30, 1923, the sum of \$12,500,000 and an additional sum equal to the balance unexpended of the appropriation herein provided for the last preceding fiscal year. Five hundred thousand dollars of the appropriation is to be used for the publication of periodicals devoted to Americanization problems; for aiding in the correlation of aims and work carried on by local bodies, private individuals, and organizations; for studies and reports through the Bureau of Education, etc. The balance of the amount appropriated is to be apportioned to the several states in the ratio which the number of resident illiterates and other persons unable to understand English language, sixteen years of age and over, bears to the number of resident illiterates. The total sum allotted to any state shall not be less than \$5,000 for any fiscal year. Proper safeguarding is provided for in the matter of the expenditure of the money by the states.

OIL SHALE

H. R. 2348. Introduced by Mr. Taylor of Colorado; referred to the Committee on Mines and Mining. (Authorizing investigation of oil shale to determine practicability of utilization as commercial product.)

The bill authorizes the Secretary of the Interior to make experiments and investigations, through the Bureau of Mines, of oil shale, to determine the commercial and economic practicability of its utilization as a commercial product; and there is hereby appropriated, out of the funds in the Treasury not otherwise appropriated, the sum of \$140,000, or so much thereof as may be needed; to conduct such experiments and investigations, including personal services in the District of Columbia and elsewhere, and including supplies, equipment, expenses of traveling and subsistence, and for every other expense incident to this work.

The Secretary of the Interior is authorized and directed to sell or otherwise dispose of any property, plant, or machinery purchased or required under the provisions of this Act as soon as the experiments and investigations hereby authorized have been concluded, and report the results of such experiments and investigations to Congress.

PUBLIC LANDS

S. 733. Introduced by Mr. Myers; referred to the Committee on Public Lands. (Amending the Act approved June 22, 1910, which provides for *agricultural entries on coal lands*.) The bill is so amended as to provide that unreserved public lands of the United States, exclusive of Alaska, which have been withdrawn or classified as coal lands, whenever such entry or withdrawal shall be made with a view of obtaining or passing title with a reservation to the United States of the coal in the lands and of the right to prospect for, mine, and remove same, but no desert entry made shall contain more than one hundred and sixty acres. Those who have so classified the land may perfect the same under the provisions of the law under which the claims were initiated but shall receive a limited patent which is provided for by the Act. Special rules are provided for the satisfactory proof in compliance with the provisions of the law. The Interior Department is vested with the authority to carry out the provisions of the Act.

ANNUAL ASSESSMENT WORK

H. R. 2919. Introduced by Mr. Sutherland; referred to the Committee on Territories. The bill provides that annual assessment on mining claims in the territory of Alaska may be performed as follows: During the first year and until patent has been issued therefor at least \$100 worth of work shall be performed. The owner or locator in lieu of such labor and improvement may pay annually to the Treasurer of Alaska the sum of \$100 to be expended on public roads, trails, bridges, etc., in the vicinity of the mining claim in question. The owner of the claim may perform two or not more than three years of assessment work in one year and upon proof of such expenditure, he shall not be required to do any assessment work thereon for the succeeding year, but for no longer than three years.

IMMIGRATION

H. R. 2171. Introduced by Mr. Lea; referred to the Committee on Immigration and Naturalization. Amending Immigration Act by providing that all feeble-minded persons, subject to insanity or otherwise, persons with chronic alcoholism, paupers, etc., be excluded from entering the United States; also persons who have been convicted of or admit having committed a felony, polygamists, anarchists, or persons who believe in or advocate the overthrow by force or violence of the government, or who disbelieve in or are opposed to organized government, or persons who are members of or affiliated with any organization entertaining and teaching disbelief in or opposition to organized government; persons who are natives of islands not possessed by the United States, lying wholly between the twenty-first and fifty-first parallels of latitude north and other undesirable citizens are prohibited from entering under the provisions of this Act.

BOLSHEVIKI

H. R. 2488. Introduced by Mr. Upshaw; referred to the Committee on Post Office and Post Roads. The bill provides that from and after six months from the date of the passage of the Act it shall be unlawful for any individual, firm, association, corporation, or any agent of any firm, etc., to circulate through the mails any paper, magazine, pamphlet, or periodical published in the United States in any foreign language, unless said publication shall carry in parallel column a full and accurate translation in the English language. A fine of \$5,000 and one year's imprisonment for each such offense is imposed for violation of this Act.

H. R. 2467. Introduced by Mr. Upshaw, referred to the Committee on Judiciary. The bill provides that from and after the passage of this Act it shall be unlawful for any organization of whatever nature to place in its name or title, or in the caption declaring its purposes, the name of any foreign country before the word "American" and that each member of any organization violating this Act shall be subject to a fine of \$1,000 and to imprisonment for one year.

HIGH COMMISSION

S. 631. Introduced by Mr. Fletcher; referred to the Committee on Judiciary. (Amending the Act providing for *International High Commission*.) The bill provides that the Act approved February 7, 1916, entitled "An Act to provide for the maintenance of the United States section of the International High Commission" be amended to read as follows: There is hereby established in the United States section of the Inter-American High Commission, hereafter to be known as the United States section, to consist of the Secretary of the Treasury, who shall be chairman, and eight other persons to be appointed by the President as members of the United States section. Each person so appointed shall serve for five years and re-

ceive a yearly salary of \$12 and his actual and necessary expenses arising from attendance at meetings, etc. This section shall co-operate with the other sections of the Inter-American High Commission in bringing about between the Republics of North, Central and South America, and the West Indies as substantial uniformity in commercial law and practice, and in fiscal and administrative regulations, particularly as concerns bills of exchange, checks, commercial paper, and bills of lading; the classification of merchandise; commercial and vital statistics; customs regulations, consular documents, and port charges; legislation concerning trade-marks, patents and copyrights; rates of postage and charges for mail orders and parcel post; facilities of communication and transportation; the establishment of an international gold clearance fund; the establishment of an inter-American tribunal for the adjustment of commercial or financial disputes between two or more American countries; and the development of legal procedure for the arbitral settlement of commercial disputes. The United States section shall not be concerned with the promotion of trade, or with matters essentially diplomatic or political in character. There shall be a secretary and assistant secretary of the United States section, who shall be appointed by the Secretary of the Treasury and receive annual salaries of \$5,000 and \$4,500 respectively. The Secretary is authorized to employ and fix the compensation of such technical and clerical assistants as he may find necessary for the fulfillment of the objects above enumerated. This Act shall take effect July 1, 1920.

BUREAU OF MINES MOVIES

TWO NEW PICTURE films are ready for distribution by the Bureau of Mines. "A Dollar Saved is a Dollar Earned" is the title of one of them, and "The Story of Ingot Iron" is the name of the other. The former was produced in co-operation with the National Association of Pipe Covering Industries, and the latter in co-operation with the American Rolling Mills Company of Middletown, Ohio. Requests for these pictures should be directed to the Pittsburgh Station of the Bureau of Mines.

OIL ATHLETES SEEK TAX RELIEF

THE GARGOYLE Athletic and Recreation Association, comprising 800 members of the Vacuum Oil Company of Rochester, N.Y., has petitioned Congress for repeal of the 10 percent tax on athletic goods.

ELECTRIC POWER aggregating thirty-nine billion kilowatt-hours was produced by public utility companies in 1919, according to calculations just completed and announced by the U. S. Geological Survey. Of this power 62 percent was produced by fuel and 38 percent by water. The fuel consumed in this manner consisted of thirty-five million tons of coal, eleven million barrels of oil and 21.7 billion cubic feet of gas.

CO-OPERATIVE SAFETY HEAD LEAVES TO INAUGURATE WORK

C. LORIMER COLBURN, who represents the United States Bureau of Mines in co-operative safety work with the National Safety Council, left Washington April 20 for Wilkes-Barre, Pa. From there he went to Pittsburgh, and on May 1 will arrive in Chicago to spend three days familiarizing himself with the work of the National Safety Council. From Chicago he will go to Houghton, Michigan, to begin field work, and from Houghton he will go to Hibbing, Minn. He expects to stay out in the field until early in June, when he will return to Washington for a brief stay.

LEAD AND ZINC PROBLEMS TO BE STUDIED

K. BAUMGARTEN has been appointed Mining Engineer of the United States Bureau of Mines, and will be attached to the Mississippi Valley Station at St. Louis. Mr. Baumgarten has had fourteen years experience in the United States and Mexico. During the last eighteen months he has been an examiner for the War Minerals Relief Commission in Washington.

Research work for determination of means for securing increased efficiency in zinc and lead mining operations is to be undertaken by the Bureau of Mines through its Mississippi Valley Station at St. Louis. It is hoped that depressed conditions in the metal markets will be met to a degree by decreased production costs resulting from the activities which will be inaugurated in the near future. Mr. Baumgarten has been assigned to the St. Louis station in connection with this work. Special attention will be paid to the lead and zinc operations at Joplin, Mo., it is understood.

U. S. CURRENCY FOR VIRGIN ISLANDS

IN a letter to Congress, Secretary of the Navy Denby recommends establishment of U. S. coinage and currency as the legal standard of value in the Virgin Islands, saying this legislation is necessitated by the increasing intimacy and mutual relationship, especially commercial, between the United States and these islands. The proposed legislation has the approval of the director of the mint and the Treasury Department. The legislation is urged in the interest of the successful administration of the Virgin Islands, their prosperity and their closer financial and commercial relations with the United States.

JAPANESE COAL MINE MAGNATE VISITS IN WASHINGTON

VISCOUNT Tadishira Inouye, who is the head of the Fusum Coal Mines near Mukden, and a member of the House of Peers of Japan, has been in Washington during the last fortnight in conference with officials of the Bureau of Mines and the Geological Survey. He was entertained at the Cosmos Club by H. Foster Bain, director of the Bureau of Mines. Guests included prominent engineers and officials of the Bureau and the Survey.

HOOVER LEADS ENGINEERS

THE AMERICAN Association of Engineers has been conducting an investigation to find out just who are the "most highly respected" engineers in the various branches of the profession. Ballots were submitted to the deans of engineering and scientific schools. The last "returns" showed George W. Goethals leading the civil engineers, John A. Brashear, the mechanical engineers, C. P. Steinmetz, the electrical engineers, and Secretary of Commerce Herbert Hoover the mining engineers. The vote for mining engineers stood as follows: Herbert C. Hoover, 32; John H. Hammond, 29; J. E. Spurr, 34; J. Parke Channing, 18; Daniel C. Jackling, 9; Pope Yotman, 6; L. D. Ricketts, 5; Robert Poele, 5; Horace Winchell, 3; S. J. Jennings, 2.

COMMISSION ON OIL DISPUTE.—A proposal that the United States appoint a commissioner to confer with the British Petroleum Commission looking to adjustment of the dispute between the United States and Great Britain over Mesopotamia oil lands is being considered by the State Department.

SECRETARY DAVIS WANTS STRONGER LABOR ADJUSTMENT LAW

SECRETARY of Labor Davis advocates amendment of the law creating the division of conciliation of his department so as to make it more effective in averting and settling labor disputes. He holds there should be more "teeth" in the law so as to compel both sides to abide by terms of agreements, and that both sides should be compelled to discuss disputes before the beginning of a strike, in which a representative of the department would participate.

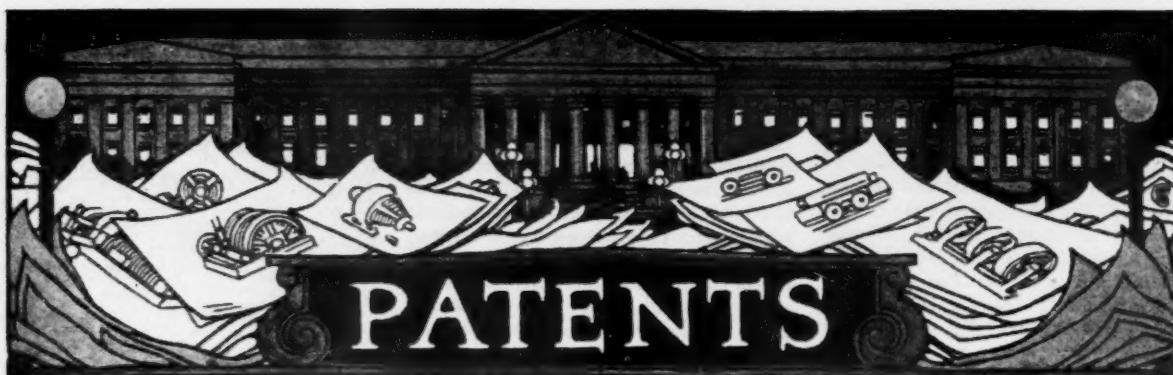
TALLMAN AS MINING LAWYER.

Clay Tallman of Nevada, former Land Office Commissioner, has been admitted to practice before the United States Supreme Court. He will specialize in mining cases.

OIL LAND SUIT.—The McKittrick Oil Company has asked the Supreme Court to review the decision of the district court of appeals of California which gave title to the Southern Pacific Railroad of oil lands in Kern County, Cal., alleged to be the property of the oil company.

SALE OF OIL LANDS AUTHORIZED BY INTERIOR DEPARTMENT

THE INTERIOR DEPARTMENT will sell 6,000 acres of land in the Salt Creek field at Douglas, Wyoming, June 15, a maximum of 640 acres being set for each purchaser. The land will be sold to those offering the highest cash bonuses. The land is divided into tracts of 164 acres. Royalties range from 25 to 33 and one-third percent, depending upon proximity to the center of production.



1,368,618—*H. B. Faber*, New York, N. Y., Feb. 15, 1921.

METALLURGICAL AND CHEMICAL FILTER of the rotary suction type and provided with means for directing the filtrate and the wash water to different points, and means for providing a counter pressure in excess of the pressure medium to lift the solids from successive portions of the filter without relieving the pressure on the filtering portions.

1,368,775—*W. G. Vreeland*, Chattanooga, Tenn., Feb. 15, 1921. Assigned to Lucey Manufacturing Corporation of Tennessee.

CROWN BLOCK FOR WELL DRILLING MACHINES.

1,368,815—*J. F. McNeil*, Clifton, Arizona, Feb. 15, 1921.

CONCENTRATING TABLE in which the invention is directed to the disposition and arrangement of several series of riffles.

1,368,901—*F. Cushman*, Seattle, Washington, Feb. 15, 1921.

ORE SEPARATOR.

1,369,049—*M. W. Quick*, Titusville, Pa., Feb. 22, 1921.

METHOD AND APPARATUS FOR OPERATING OIL WELLS which consists in interposing resistance to the escape of vapors and varying said resistance by alternately increasing and reducing the same, thereby accumulating a maximum tension in the well nearer the other tensions of the vapors of said well than zero tension, and the variation having a range of less than 50% of the ultimate tension of the vapors in the well.

1,369,054—*W. A. Scott*, Oak Park, Ill., Feb. 22, 1921.

FLOTATION PROCESS for ores containing acid consuming ingredients, the operation of reducing the ore to a free flowing pulp and introducing into said pulp a bubble forming gas in admixture with an acid.

1,369,175—*N. P. Holmes*, Claremont, N.H., Feb. 22, 1921. Assigned to Jeffrey Manufacturing Company.

MINING MACHINE TRUCK comprising improved truck driving means and, more especially, improved clutch and brake mechanism therefor, and improved controlling mechanism for said clutch and brake mechanisms, whereby the connections of the truck wheels to a source of power, as for instance, the motor of a mining machine mounted thereon, as well as the speed of rotation of these wheels when the truck is moving along its track, may be regulated in an improved manner.

CONDUCTED BY JOHN BOYLE, JR.

1,369,350—*W. Ostwald*, Grossbotten, Saxony, Germany. Assigned to The Chemical Foundation, Feb. 22, 1921.

METHOD OF AND APPARATUS FOR UTILIZING MINE WASTE BY MEANS OF THE HEAT OF DUMP HEAPS comprising adding chlorin containing compound to the waste, liberating through the utilization of said heat, metals, and metalloids in the form of chlorid, and recovering the same by condensation.

1,368,521—*M. S. Moore*, Glasgow, Scotland, Feb. 15, 1921. Assigned to Mavor and Coulson Ltd.

CUTTER CHAIN MINING MACHINE comprising a gear casing formed with an internal circular channel at its base the axis of which channel is vertical, which gear casing is directed transversely in a plane containing the axis of the channel and at right angles or thereabout to the power shaft of the motor, one part of the gear casing being permanently fixed to the body of the machine and the other part adapted to be detachably secured to the fixed part, a base structure having a circular rim adapted to be mounted with its rim fitting within the channel of the gear casing, a chain driving sprocket mounted upon a driving axle extending through the base structure, and a cutter chain member, the plane of which is below the base structure, mounted capable of angular adjustment about a vertical axis situated in the area contained within the circumference of the base structure.

1,369,891—*E. P. Halliburton*, New Wilson, Okla., March 1.

CEMENTING OIL WELLS comprising retaining means adapted to be placed in the casing for retaining a body of cement, forcing said retaining means downwardly and lineal measuring means for determining the depth to which the body of cement has been forced.

1,369,898 and 1,369,899—*J. W. McCalliard*, Los Angeles, Calif., March 1.

CONCENTRATING TABLE.

1,370,357—*C. L. Perkins* and *R. E. Sayre*, Pittsburgh, Pa., assigned to Metals Recovery Co., March 1.

FLOTATION PROCESS comprising adding to the pulp a small amount of terpin hydrate.

1,370,366—*R. E. Sayre*, Pittsburgh, Pa., assigned to Metals Recovery Co., March 1.

FLOTATION PROCESS comprising adding to the pulp a small amount of dehydrate alcohol.

1,370,367—*R. E. Sayre*, Pittsburgh, Pa., assigned to Metals Recovery Co., March 1.

FLOTATION PROCESS comprising adding to

the pulp a small amount of thio-aldehyde compound.

1,370,620—*F. R. Willson*, Columbus, Ohio, assigned to Jeffrey Mfg. Co., March 8.

ROTARY SCREEN. This invention relates to improvements in revolving screens, and particularly to screens having the screen element formed of parallel rods, wires or bars arranged in, or approximately in, planes transverse, to the axis. Heretofore mechanisms of this class have been generally made with a supporting frame and a screening element formed of fabric produced by interweaving or interlacing wire of one degree of fineness or another; this woven wire element either being carried as an integral sheet entirely around the axis and stretched upon its frame or being cut into sections, and the sections severally secured to the frame upon arcs or chords of a cylinder. The interweaving or interlacing of the strand wires and the mesh wires forms apertures, generally square, sometimes smaller, sometimes larger, and always surrounded by wires or rods. Many materials which are delivered to the screen are of such nature that particles or masses lodge in these apertures and clog them because of their adhering to, or being caught between, the cross wires or rods. Again, when abrasive materials are being treated in the screens, the wire mesh sections rapidly wear away and renewed screen devices are required. If the rods or wires are interwoven or interlaced, relatively large sections must be taken out and others substituted.

The object here is to provide a screen which will have no obstruction along lines approximately parallel to the axis, and will permit an easy and uninterrupted flow or sliding along lines around the periphery; and which will have the screen elements, proper, formed in short rod or wire sections which can be individually removed or inserted in the case of wear, breaking or bending.

1,370,700—*B. A. Mitchell* and *F. G. Janney*, Garfield, Utah, March 8.

ORE GRINDING MILL of the class commonly known as ball mills and its object is to provide forms for the shells and linings of said mills.

In the present invention the shell is composed of interlocking sections which inclose a hollow cylindrical lining in a single piece. This lining bears at one end upon a grate to hold and lock said grate to its seat over an outlet opening in the shell. At the other end it bears upon the opposite head of the shell, said bearing taking place through angularly disposed surfaces adapted to crowd the lining endwise and against the grate whenever any rotation of said lining in either direction takes place within the shell. By this means both the grate and lining are automatically locked rigidly in place.



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Irrington Smelting & Refining Works, Irvington, N. J.

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American Steel & Wire Co., Chicago and New York.

AIR COMPRESSORS

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
General Electric Co., Schenectady, N. Y.
Worthington Pump & Machinery Corp., 115 Broadway, New York City.

AMALGAMATORS

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Mine Equipment & Supply Co., Denver, Colo.

ARMATURES

General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

ARCHITECTS

Shourds-Stoner Co., Inc. Terre Haute, Ind.

ASBESTOS PRODUCTS

Mikesell Bros. Co., 156 North La Salle St., Chicago, Ill.

ASSAYERS

Walter E. Burlingame, 1736 Lawrence St., Denver, Colo.
Indiana Laboratories Co., Hammond, Ind.
Ledoux & Co., Inc., 99 John St., New York.
Pennsylvania Smelting Co., Pittsburgh, Pa.
W. L. Piers, 428 18th St., Denver, Colo.
Thompson Balance Co., Denver, Colo.
Union Assay Office, Inc., Box 1446, Salt Lake City, Utah.

AUTOMATIC CAR CAGERS

Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.

AUTOMATIC COAL SKIP

Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

AUTOMATIC (Mine Doors, Truck and Electric Switches)

American Mine Door Co., Canton, Ohio.

BALANCES

Thompson Balance Co., Denver, Colo.

BALL MILLS

Mine Equipment & Supply Co., Denver, Colo.
Worthington Pump & Machinery Corp., 115 Broadway, New York City.

BATTERY-CHARGING EQUIPMENT

General Electric Co., Schenectady, N. Y.

BELTING (Conveyor, Elevator, Transmission)

Chicago Belting Co., Chicago, Ill.
Jeffrey Mfg. Co., 958 N. Fourth Avenue, Columbus, Ohio.

BELTING, SILENT CHAIN

Morse Chain Co., Ithaca, N. Y.

BELTING SUPPLIES

Chicago Belting Co., Chicago, Ill.

BINS (Coke and Coal)

Jeffrey Mfg. Co., Columbus, Ohio.

BIT SHARPENERS

Denver Rock Drill Mfg. Co., Denver, Colo.

BLASTING SUPPLIES

du Pont Powder Co., The E. I., Wilmington, Del.
Hercules Powder Co., Wilmington, Del.
National Fuse & Powder Co., Denver, Colo.

BLOWERS

General Electric Co., Schenectady, N. Y.

BOILERS

Allis-Chalmers Mfg. Co., Milwaukee, Wis. (feed pump).
Mine Equipment & Supply Co., Denver, Colo.

BRATTICE CLOTH

Mikesell Brothers Co., 156 N. La Salle Street, Chicago, Ill.

BREAKERS (Construction and Machinery)

Jeffrey Mfg. Co., Columbus, Ohio.
Vulcan Iron Works, Wilkes-Barre, Pa.
Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.
Wilmot Engineering Co., Hazleton, Pa.

BRIQUETTING MACH.

General Briquetting Co., 25 Broad Street, New York City.
Jeffrey Mfg. Co., Columbus, Ohio.

BUCKETS (Elevator)

Hendrick Manufacturing Company, Carbondale, Penna.
Jeffrey Mfg. Co., Columbus, Ohio.
Stephens-Adamson Mfg. Co., Aurora, Ill.

CABLES (Connectors and Guides)

American Mine Door Co., Canton, Ohio.

CABLEWAYS

Jeffrey Mfg. Co., Columbus, Ohio.
Lidgerwood Mfg. Co., 96 Liberty St., New York City.

CAGES

Car-Dumper & Equipment Co., Chicago, Ill.
Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.
Holmes & Bros., Robert, Inc., Danville, Ill.
Lidgerwood Mfg. Co., 96 Liberty St., New York City.

CAGE (Safety Appliances)

Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.

CAR CONTROL AND CAGE EQUIPMENT

Car-Dumper & Equipment Co., Chicago, Ill.

CAR DUMPS

Car-Dumper & Equipment Co., Chicago, Ill.

CAR AND CAR WHEELS

Hockensmith Mine Car Co., Penn Station, Pa.
United Iron Works Co., Kansas City, Mo.
Watt Mining Car Wheel Co., Barnesville, Ohio.

CAR-HAULS

Car-Dumper & Equipment Co., Chicago, Ill.

CASTINGS

Jeffrey Mfg. Co., 958 N. Fourth Street, Columbus, Ohio.
The Lunkenheimer Co., Cincinnati, Ohio.
Mine Equipment & Supply Co., Denver, Colo.

CHAINS

Jeffrey Mfg. Co., Columbus, Ohio.
Morse Chain Co., Ithaca, N. Y.
Stephens-Adamson Mfg. Co., Aurora, Ill.

CHEMICALS

The Barrett Company, 90 West St., New York City.
Roessler & Hasselacher Chemical Co., 100 William St., New York.

CHEMISTS

Walter E. Burlingame, 1736 Lawrence St., Denver, Colo.
Hunt, Robt., & Co., Insurance Exchange, Chicago, Ill.
Indiana Laboratories Co., Hammond, Ind.
Ledoux & Co., A. R., Inc., 99 John St., New York City.
W. L. Piers, 428 18th St., Denver, Colo.
Union Assay Office, Inc., Box 1446, Salt Lake City, Utah.

CIRCUIT BREAKERS

Automatic Reclosing Circuit Breaker Co., The, Columbus, O.
General Electric Co., Schenectady, N. Y.

CIVIL ENGINEERS

Shourds-Stoner Co., Inc., Terre Haute, Ind.

CLAMPS (Trolley)

Ohio Brass Co., Mansfield, Ohio.

CLUTCHES

Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.

COAL COMPANIES

Clinchfield Coal Corp., Dante, Va.
Lehigh Coal & Navigation Co., Philadelphia, Pa.
Stonega Coal & Coke Co., Philadelphia, Pa.
Thorne, Neale & Co., Philadelphia, Pa.
Wholesale Coal Co., Pittsburgh, Pa.

COAL CRUSHERS

American Pulverizer Co., 18th and Austin Sts., St. Louis, Mo.
Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.
Jeffrey Mfg. Co., Columbus, O.
Stephens-Adamson Mfg. Co., Aurora, Ill.

COAL CUTTERS

Goodman Mfg. Co., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, Ohio.

COAL DRYING PLANTS

Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

COAL HANDLING MACHINERY

Jeffrey Mfg. Co., Columbus, Ohio.
Lidgerwood Mfg. Co., 96 Liberty St., New York City.
Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Watt Mining Car Wheel Co., Barnesville, Ohio.

COAL LOADING MACHINES

Myers-Whaley Company, Knoxville, Tenn.

COAL MINING MACHINERY

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Goodman Mfg. Co., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, Ohio.
Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

COAL MINE POWER PLANTS

Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

COAL MINING PLANTS

Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

COAL WASHING MACHINERY

Stephens-Adamson Mfg. Co., Aurora, Ill.

COAL WASHING PLANTS

Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

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Nicholson, W. H., & Co., Wilkes-Barre, Pa.
Ohio Brass Co., Mansfield, Ohio.

COILS (Choke)

General Electric Co., Schenectady, N. Y.

COKE OVENS

The Koppers Co., Pittsburgh, Penna.

COMPANY STORES (Companies)

Allison Coupon Co., Indianapolis, Ind.

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General Electric Co., Schenectady, N. Y.

CONCENTRATORS (Magnetic)

Worthington Pump & Machinery Corp., 115 Broadway, New York City.

CONCENTRATORS (Table)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Mine Equipment & Supply Co., Denver, Colo.
Worthington Pump & Machinery Corp., 115 Broadway, New York City.

CONCRETE REINFORCEMENT

American Steel & Wire Co., Chicago and New York.

CONDENSERS

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.
Worthington Pump & Machinery Corp., 115 Broadway, New York City.

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Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.
Shourds-Stoner Co., Inc., Terre Haute, Ind.

CONTRACTORS

R. G. Read Co., Fisher Bldg., Chicago, Ill.
Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

CONTROLLERS

General Electric Co., Schenectady, N. Y.
Goodman Manufacturing Co., Halsted St. and 48th Place, Chicago, Ill.
Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

CONVEYORS, BELT

Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.
Stephens-Adamson Mfg. Co., Aurora, Ill.

CONVEYORS, CHAIN FLIGHT

Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.
Wilmot Engineering Co., Hazleton, Pa.
Stephens-Adamson Mfg. Co., Aurora, Ill.

Why the Fort Wayne?

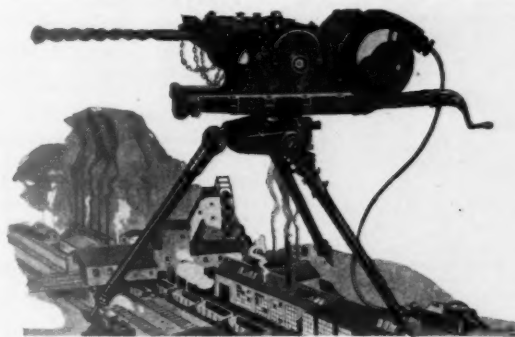
THE adaptability of the Fort Wayne Electric Rock Drill is a constant source of enthusiastic comment.

The Fort Wayne may be operated on either direct or alternating current. Thus it is ready for business wherever electric current is available. You can hook it onto the trolley within a few minutes after it is unloaded.

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3. *Loss of labor in replacing parts.*

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 Stephens-Adamson Mfg. Co., Aurora, Ill.

CONVEYORS AND ELEVATORS

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 Stephens-Adamson Mfg. Co., Aurora, Ill.

CONVEYORS, PAN OR APRON

Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.
 Stephens-Adamson Mfg. Co., Aurora, Ill.

CONVEYORS, PANS AND FLIGHTS

Hendrick Manufacturing Company, Carbondale, Pa.

CONVEYORS, SCREW

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 Stephens-Adamson Mfg. Co., Aurora, Ill.

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United Metals Selling Co., 42 Broadway, New York City.

COPPER WIRE

Anaconda Copper Mining Co., 111 W. Washington St., Chicago, Ill.

CORE DRILLING

H. R. Ameling Prospecting Co., St. Louis, Mo.
 Hoffman Bros., Punxsutawney, Pa.

COUPLINGS

Nicholson, W. H., & Co., Wilkes-Barre, Pa.

COUPONS

Allison Coupon Co., Indianapolis, Ind.

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Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 American Pulverizer Co., 18th and Austin Sts., St. Louis, Mo.
 Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.
 Mine Equipment & Supply Co., Denver, Colo.
 Stephens-Adamson Mfg. Co., Aurora, Ill.
 United Iron Works Co., Kansas City, Mo.
 Worthington Pump & Machinery Corp., 115 Broadway, New York City.

CRUSHERS, COAL

American Pulverizer Co., 18th and Austin Sts., St. Louis, Mo.
 Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.
 Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.
 Stephens-Adamson Mfg. Co., Aurora, Ill.
 United Iron Works Co., Kansas City, Mo.

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American Pulverizer Co., 18th and Austin Sts., St. Louis, Mo.
 Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.

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American Cyanamid Co., New York, N. Y.

DERRICKS AND DERRICK FITTINGS

James H. Channon Mfg. Co., 227 W. Erie St., Chicago, Ill.

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 Mine Equipment & Supply Co., Denver, Colo.
 Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.
 Shourds-Stoner Co., Inc., Terre Haute, Ind.

DIAMOND CORE DRILL CONTRACTING

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American Mine Door Co., Canton, Ohio.

DRAG LINES

Denver Rock Drill Mfg. Co., Denver, Colo.

DREDGES, GOLD AND TIN

New York Engineering Co., 2 Rector St., New York City.

DRIFTERS, DRILL

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 Ingersoll-Rand Co., New York City.

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 Ingersoll-Rand Co., New York City.

DRILLS, CORE

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 Ingersoll-Rand Co., New York City.

DRILLS, ELECTRIC

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 Ingersoll-Rand Co., New York City.
 Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.
 Union Electric Co., Pittsburgh, Pa.

DRILLS, HAMMER

Denver Rock Drill Mfg. Co., Denver, Colo.
 Ingersoll-Rand Co., New York City.

DRILLS (Hand Operated Coal)

Ohio Brass Co., Mansfield, Ohio.
 Ingersoll-Rand Co., New York City.

DRILLS, PNEUMATIC

Denver Rock Drill Mfg. Co., Denver, Colo.
 Ingersoll-Rand Co., New York City.

DRILLS, PROSPECTING

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 New York Engineering Co., 2 Rector St., New York City.

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 Ingersoll-Rand Co., New York City.
 Union Electric Co., Pittsburgh, Pa.

DRILL STEEL SHARPENERS

Denver Rock Drill Mfg. Co., Denver, Colo.

DRIVES, SILENT CHAIN

Morse Chain Co., Ithaca, N. Y.

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Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.

DRYERS, ORE

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

DUMPERS, ROTARY

Car-Dumper & Equipment Co., Chicago, Ill.

DUMP CARS

Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.

DYNAMITE

du Pont Powder Co., The E. I. Wilmington, Del.
 Hercules Powder Co., Wilmington, Del.
 National Fuse & Powder Co., Denver, Colo.

DYNAMOS

General Electric Co., Schenectady, N. Y.
 Goodman Mfg. Co., Forty-eighth Place and Halstead St., Chicago, Ill.
 Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

ELECTRICAL APPARATUS

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 General Electric Co., Schenectady, N. Y.
 Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

ELECTRICAL ENGINEERS

Shourds-Stoner Co., Inc., Terre Haute, Ind.

ELECTRIC HOISTING MACHINERY

Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.

ELECTRIC LOCOMOTIVES

General Electric Co., Schenectady, N. Y.

Goodman Mfg. Co., Forty-eighth Place and Halstead St., Chicago, Ill.

Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.

Ohio Brass Co., Mansfield, Ohio.

Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

ELECTRIC MINE SUPPLIES

General Electric Co., Schenectady, N. Y.

Ohio Brass Co., Mansfield, Ohio.

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General Electric Co., Schenectady, N. Y.

Union Electric Co., Pittsburgh, Pa.

Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

ELEVATORS

Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.

Stephens-Adamson Mfg. Co., Aurora, Ill.

ELEVATORS, BUCKET

Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.

Stephens-Adamson Mfg. Co., Aurora, Ill.

Stephens-Adamson Mfg. Co., Aurora, Ill.

ELIMINATORS

Nicholson, W. H. & Co., Wilkes-Barre, Pa.

ENGINES

Lidgerwood Mfg. Co., 96 Liberty St., New York City.

Worthington Pump & Machinery Corp., 115 Broadway, New York City.

Worthington Pump & Machinery Corp., 115 Broadway, New York City.

ENGINES, GAS AND GASOLINE

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Mine Equipment & Supply Co., Denver, Colo.

Worthington Pump & Machinery Corp., 115 Broadway, New York City.

Worthington Pump & Machinery Corp., 115 Broadway, New York City.

ENGINES (Hoisting and Hauling)

Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.

ENGINES, OIL

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Mine Equipment & Supply Co., Denver, Colo.

Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

Worthington Pump & Machinery Corp., 115 Broadway, New York City.

ENGINES, STEAM

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

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Hunt, Robert & Co., Insurance Exchange, Chicago, Ill.

Indiana Laboratories Co., Hammond, Ind.

Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.

R. G. Read Co., Fisher Bldg., Chicago, Ill.

Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

EXPLOSIVES

Du Pont Powder Co., Wilmington, Del.
 Hercules Powder Co., Wilmington, Del.
 National Fuse & Powder Co., Denver, Colo.

FANS, VENTILATING

Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.

General Electric Co., Schenectady, N. Y.

Jeffrey Mfg. Co., 958 N. Fourth St., Columbus, Ohio.

Vulcan Iron Works, Wilkes-Barre, Pa.

Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

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Stephens-Adamson Mfg. Co., Aurora, Ill.

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General Naval Stores Co., 90 West St., New York City.

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James H. Channon Mfg. Co., 227 W. Erie St., Chicago, Ill.

Mine Equipment & Supply Co., Denver, Colo.

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Mine Equipment & Supply Co., Denver, Colo.

FROGS AND SWITCHES

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Allis-Chalmers Mfg. Co., Milwaukee, Wis.

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Mikesell Bros. Co., 156 N. La Salle St., Chicago, Ill.

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Jeffrey Mfg. Co., Columbus, Ohio.

Stephens-Adamson Mfg. Co., Aurora, Ill.

Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

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Morse Chain Co., Ithaca, N. Y.

GENERAL SHEET AND LIGHT STRUCTURAL WORK

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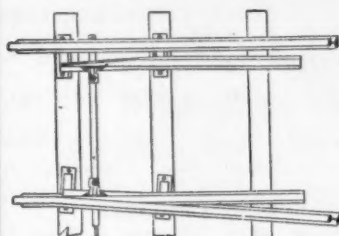
GRINDING BALLS

Mine Equipment & Supply Co., Denver, Colo.

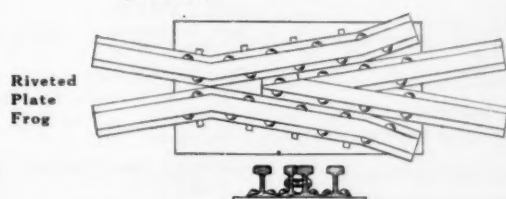
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Ohio Brass Co., Mansfield, Ohio.

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Vulcan Iron Works, Wilkes-Barre, Pa.
Worthington Pump & Machinery Corp., 115 Broadway, New York City.

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Lidgerwood Mfg. Co., 96 Liberty St., New York City.
Stephens-Adamson Mfg. Co., Aurora, Ill.

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Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.
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United Iron Works Co., Kansas City, Mo.
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Lidgerwood Mfg. Co., 96 Liberty St., New York City.

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Shourds-Stoner Co., Inc., Terre Haute, Ind.

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Mikesell Bros. Co., 156 N. La Salle St., Chicago, Ill.

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Ohio Brass Co., Mansfield, Ohio.
Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

INSULATORS (Porcelain)
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Ohio Brass Co., Mansfield, Ohio.
Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

INSULATORS (Third Rail)
General Electric Co., Schenectady, N. Y.
Ohio Brass Co., Mansfield, Ohio.

INSULATORS (Trolley)
General Electric Co., Schenectady, N. Y.
Ohio Brass Co., Mansfield, Ohio.

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Roebling Sons, John A., Trenton, N. J.

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W. Erie St., Chicago, Ill.

JIGS
Mine Equipment & Supply Co., Denver, Colo.

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Allis-Chalmers Mfg. Co., Milwaukee, Wis.

KILNS (Rotary Ore Nodulizers)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.

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Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

LAMPS (Carbon)
General Electric Co., Schenectady, N. Y.

LAMPS, ELECTRIC
General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

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American, Zinc, Lead & Smelting Co., 1012 Pierce Bldg., St. Louis, Mo.

LEATHER BELTING
Chicago Belting Co., Chicago, Ill.

LEATHER (Valves, Packings, Specialties)
Chicago Belting Co., Chicago, Ill.

LIGHTNING ARRESTERS
General Electric Co., Schenectady, N. Y.

LOADING BOOMS
Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.
Jeffrey Mfg. Co., Columbus, Ohio.
Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

LOADING MACHINES
Connellsville Mfg. & Mine Supply Co., Connellsville, Pa.
Myers-Whaley Company, Knoxville, Tenn.

LOCOMOTIVE COALING STATIONS
Roberts & Schaefer Co., McCormick Bldg., Chicago, Ill.

LOCOMOTIVES, ELECTRIC
General Electric Co., Schenectady, N. Y.
Goodman Mfg. Co., Chicago, Ill.
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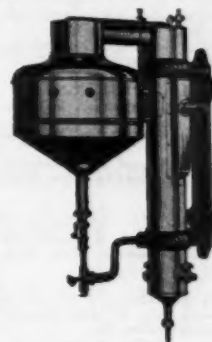
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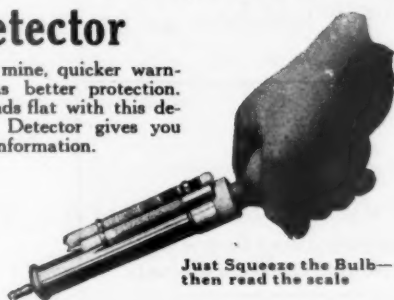
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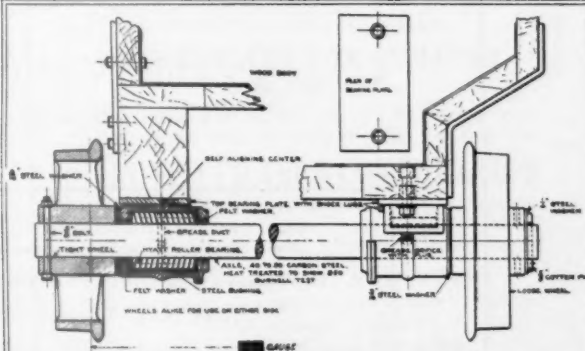
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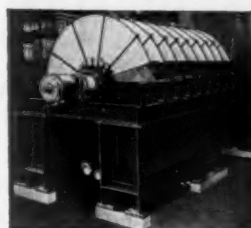
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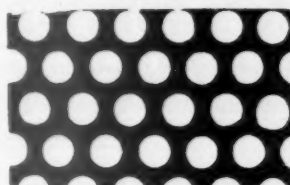
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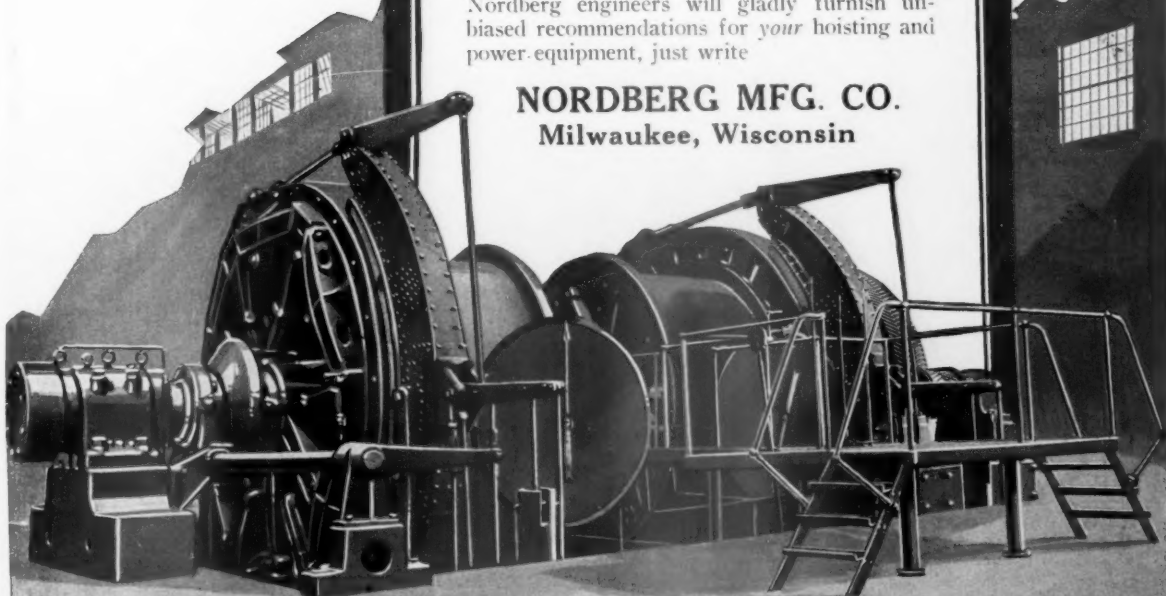
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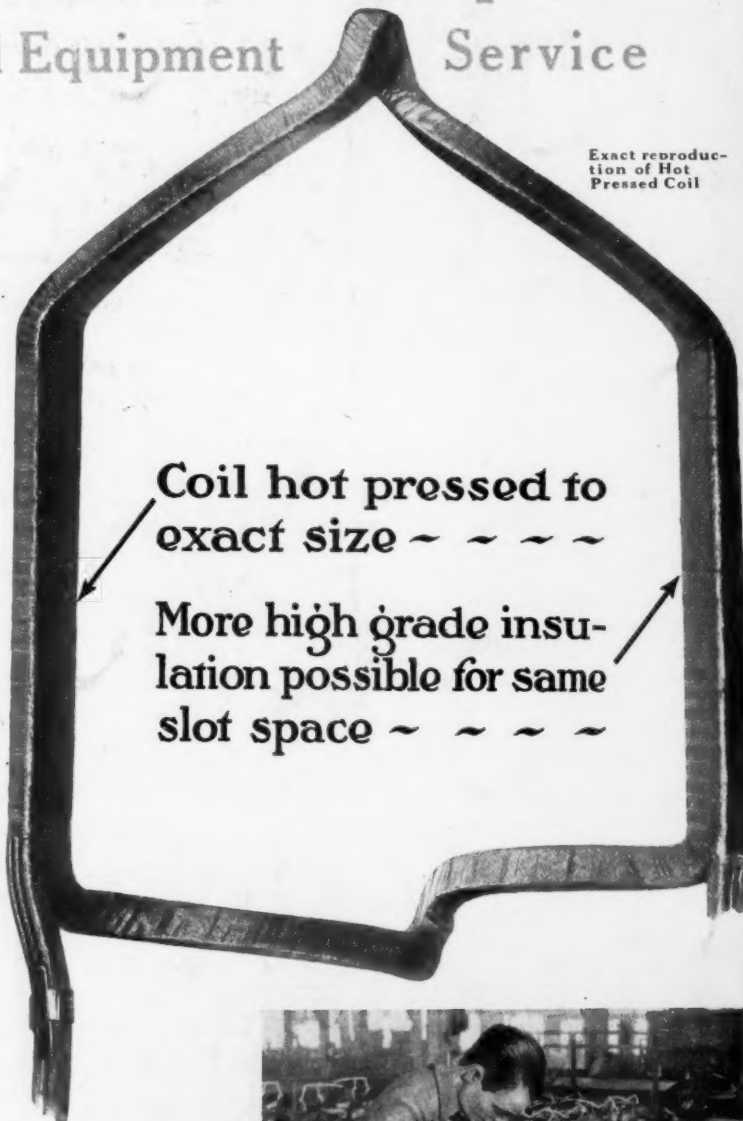
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